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ABSTRACT

This document describes an experimental program which is designed to help students from grade 5 to grade 7 who are working at or slightly below grade level maintain mathematics skills. Students receive nine home-study packets containing two to four lessons each. Parents must make a commitment to supervise the home-study. The 25 lessons presented in grade 5 cover topics such as: (1) addition, subtraction, multiplication and division of whole numbers; (2) addition and subtraction of fractions; (3) measurement; and (4) word problems. (PK)

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Math By Mail
Grade 5

Hampton City Schools
1819 Nickerson Blvd
Hampton, VA 23663

SE 048 815

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WELCOME TO MATH BY MAIL!

GRADE 5

Please, read the directions carefully. You may want to do this several times. Then look at the example which is worked out for you. Try it on your own to see if you get the same answer. After this you will be ready to work the other exercises. Repeat this process on each section.

GOOD LUCK!

GRADE 5 NAME_____

Lesson One

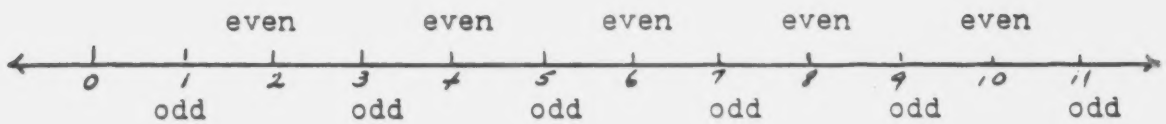
WELCOME to MATH BY MAIL!! We hope you'll work hard but also will have fun. **GOOD LUCK!**

To the Parent: **Please help your child get started on each packet and check the lessons to see if they've been completed before they are mailed. If you or your child does not understand the instructions or if help is needed in understanding the mathematics have your child call the math teacher.**

I. In this lesson you will
. identify even and odd numbers
. round numbers

EVEN or ODD

Even numbers are whole numbers divisible by 2.
Odd numbers are not divisible by 2.

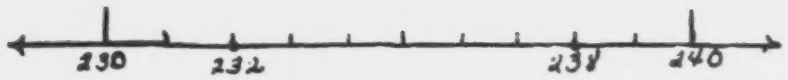


Even or odd?

1.	36 even	7.	100	13.	2 X 33 even
2.	15	8.	102	14.	2 X 47
3.	13	9.	105	15.	2 X 80
4.	20	10.	231	16.	1002
5.	19	11.	232	17.	2361
6.	25	12.	233	18.	4173

II. ROUNDING
To the nearest 10

In making an estimate we can round to the nearest 10.



232 is closer to 230 (4 or less - round down)
238 is closer to 240 (5 or more - round up)

Round to the nearest 10

number	rounded to the nearest 10
55	60
93	90
384	380
496	500
1. 22	_____
2. 18	_____
3. 54	_____
4. 183	_____
5. 69	_____
6. 846	_____
7. 908	_____

Round to the nearest 100

147	100
686	700
3961	4000
350	400
8. 7609	_____

II. ROUNDING Continued:

9. 1163 _____
10. 851 _____
11. 756 _____
12. 2638 _____
13. 1800 _____
14. 931 _____

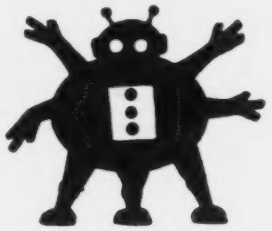
Round to the nearest 1000

7,269 7,000
29,898 30,000
15. 675,423 _____
16. 2,650 _____
17. 380,500 _____
18. 593,579 _____
19. 43,296 _____
20. 1,900 _____
21. 85,382 _____

GRADE 5 NAME_____

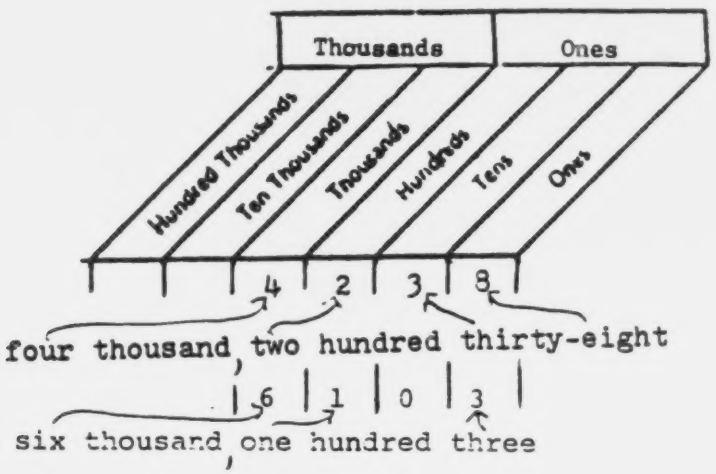
LESSON TWO

To the **PARENT:** In this lesson your child will:
Write word names for numbers.



My name is three!!

LOOK over the place value chart.
Then read the two examples.



NOW try the following.

I. Write word names for the following

1. 6,380 six thousand, three hundred eighty
2. 8,002 _____
3. 5,030 _____
4. 4,063 _____
5. 7,777 _____
6. 822 _____
7. 84 _____
8. 189 _____
9. 3,087 _____
10. 6,700 _____

NAME _____

Write the number for each

11. Eight hundred six _____
12. Seven thousand, seven 7,007
13. Three thousand, four hundred _____
14. Two hundred thirty-nine _____
15. Four thousand, twenty _____
16. Five thousand, sixty-three _____
17. One hundred ninety nine _____
18. Five thousand, fifteen _____
19. Eight thousand, three hundred _____
20. Twenty-nine _____
21. Two hundred ten _____

22. BUILD the number that has:

6 in the thousands place
9 in the ones place
3 in the tens place
0 in the hundreds place
8 in the hundred thousands place
2 in the ten thousands place

23. Write the number for:

Four hundred twenty-two thousand, nine hundred two

_____

NAME_____

II. **Circle the digit in the indicated place. Look back at the place value chart if you have trouble.** (Write number on answer sheet.)

1.	18, 307	thousands
2.	89,286	ones
3.	428,327	ten thousands
4.	5, 784	tens
5.	1,378,255	hundred thousands
6.	6,875	tens
7.	1,036	hundreds
8.	32,866	thousands
9.	82,300	hundreds
10.	596	ones

GRADE 5 NAME_____

LESSON THREE

TO THE PARENT: In this lesson your child will add whole numbers. Please have your child review the basic addition facts. Use the enclosed basic fact sheet as a 3 minute timed test.

T	O
1	4
+2	3
3	7

Add the ones; leave the tens unchanged.

	T	O
	1 7	8
+		7
	8	5

Add the ones. Change 15 to 1 ten and 5 ones. Write 5 in the ones place. Add the 1 ten to 7.

	H	T	O
	1	1 9	4
+			8
	1	0	2

Add the ones. Change 12 to 1 ten and 2 ones. Write 2 in ones place. Add the 1 ten to 9. Change 10 to 1 ten and 0 ones. Write the 0; add the 1 in hundreds place.

I. Try These

1. 16 + 3
2. 38 + 6
3. 47 + 9
4. 86 + 7
5. 48 + 37
6. 97 + 8
7. 65 + 17
8. 49 + 73
9. 53 + 96
10. 36 + 68
11. 91 + 49
12. 78 + 89

NAME_____

II. **Example:** Add 357 + 639 + 128

Step 1

$$\begin{array}{r} {\scriptstyle 2} \\ 357 \\ 639 \\ +128 \\ \hline 4 \end{array}$$

Step 2

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 357 \\ 639 \\ +128 \\ \hline 24 \end{array}$$

Step 3

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 357 \\ 639 \\ +128 \\ \hline 1124 \end{array}$$

Try These !!!!

1. $\begin{array}{r} 31 \\ 43 \\ +37 \\ \hline \end{array}$

2. $\begin{array}{r} 137 \\ 68 \\ +52 \\ \hline \end{array}$

3. $\begin{array}{r} 273 \\ 65 \\ +456 \\ \hline \end{array}$

4. $\begin{array}{r} 682 \\ 427 \\ +323 \\ \hline \end{array}$

5. $\begin{array}{r} 1672 \\ 381 \\ +235 \\ \hline \end{array}$

6. $\begin{array}{r} 2001 \\ 376 \\ +423 \\ \hline \end{array}$

7. $\begin{array}{r} 485 \\ 1313 \\ +697 \\ \hline \end{array}$

8. $\begin{array}{r} 2860 \\ 523 \\ +3576 \\ \hline \end{array}$

PLEASE ADD

1. 472
   219

2. 404
   868

3. 370
   246

4. 864
   912

5. 254
   462

6. 666
   963

7. 196
   325

8. 246
   854

All Sums have a 1.

MATH FACTS

Math Form A4-C (Rev '82)

See how many of these you can answer correctly in 3 minutes. Have someone time you and check your answers. THEN complete the remaining facts. Do NOT MAIL. KEEP for your information.

3+7	2+5=	6+0=	2+3=
5+9=	6+4=	1+0=	9+1=
8+3=	7+0=	8+5=	1+3=
7+4=	2+0=	8+4=	5+3=
8+0=	8+6=	5+7=	1+4=
0+2=	6+6=	7+9=	5+4=
1+9=	4+1=	3+2=	6+9=
9+7=	4+8=	3+4=	0+6=
2+2=	9+9=	4+3=	9+6=
2+9=	9+5=	0+5=	3+1=
1+5=	3+6=	8+8=	0+4=
3+8=	4+6=	1+8=	7+8=
1+2=	2+8=	5+1=	0+7=
4+2=	2+6=	8+7=	4+4=
5+0=	9+2=	1+1=	0+3=
7+7=	6+2=	8+9=	2+4=
7+1=	5+8=	7+3=	6+5=
5+5=	2+1=	9+0=	6+3=
9+4=	7+6=	0+0=	4+7=
6+1=	5+2=	0+1=	4+5=
3+3=	4+0=	3+5=	4+9=
2+7=	0+8=	7+5=	6+8=
8+2=	1+6=	3+9=	1+7=
9+3=	0+9=	6+7=	3+0=
5+6=	8+1=	7+2=	9+8=

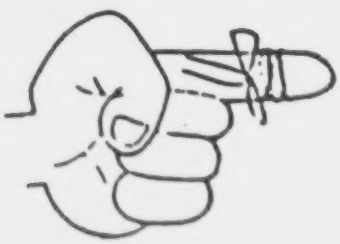
GRADE 5

NAME_____

LESSON FOUR

TO THE PARENT: In this lesson your child will subtract whole numbers. Please have your child review the basic subtraction facts. Your child should be able to complete the enclosed basic facts sheet in 3 minutes.

Remember



Subtract 5723 - 2457

I.

Step 1	Step 2	Step 3	Step 4
5 7 2 13	5 6 11 2 3	5 6 1 2 3	5 7 2 3
-2 4 5 7	-2 4 5 7	-2 4 5 7	-2 4 5 7
6	6 6	2 6 6	3 2 6 6

Try These !!!

1. 346 − 38

2. 478 − 35

3. 680 − 59

4. 879 − 425

5. 385 − 118

6. 787 − 249

7. 584 − 397

8. 700 − 578

9. 7542 − 891

10. 5201 − 4891

11. 7539 − 3876

12. 7895 − 6768

II. SUBTRACTING

Subtract.

1. 247 - 168 = _____

2. 325 - 118 = _____

3. 533 - 467 = _____

4. 7936 - 187 = _____

5. 9241 - 5436 = _____

6. 3721 - 1953 = _____

Use the code to find each difference.

67	192	385
571	16	256
434	873	95

Here's how:

⌐ - □ = _____

67 - 16 = 51

7. ⌐ - □ = _____

8. ⌐ - ⌐ = _____

9. ⌐ - ⌐ = _____

10. ⌐ - □ = _____

11. ⌐ - ⌐ = _____

12. ⌐ - ⌐ = _____

III. Subtract.

1. 55 -36	2. 436 - 42	3. 92 -85	4. 845 -359
5. 52 -15	6. 200 -113	7. 96 - 7	8. 436 -249
9. 471 -289	10. 201 -113	11. 771 -671	12. 565 -337
13. 541 -374	14. 323 -165	15. 625 -338	16. 75 -16
17. 753 -288	18. 676 -397	19. 74 -45	20. 78 -28
21. 860 -789	22. 43 -19		

MATH FACTS **Math Form Su-C (Nov '82)**

See how many of these you can answer correctly in 3 minutes. Have someone time you and check your answers. THEN complete the remaining facts. DO NOT MAIL IN.

11-5=	13-6=	7-5=	9-9=
8-5=	12-9=	15-7=	7-1=
5-5=	10-4=	12-6=	9-5=
4-1=	8-7=	15-9=	17-8=
6-3=	7-6=	11-4=	8-1=
10-5=	11-6=	7-0=	12-7=
7-2=	8-8=	10-3=	11-7=
4-0=	10-9=	13-1=	12-5=
5-1=	14-5=	16-7=	8-3=
5-0=	9-4=	2-1=	10-2=
11-9=	6-5=	9-0=	12-8=
4-2=	15-6=	2-0=	15-8=
9-8=	6-2=	14-6=	10-7=
0-0=	6-1=	13-5=	6-4=
18-9=	13-8=	3-0=	8-0=
4-4=	12-4=	14-9=	1-1=
9-6=	16-9=	5-3=	3-3=
7-4=	11-3=	13-7=	9-2=
2-2=	8-0=	5-4=	7-3=
9-1=	11-2=	13-9=	10-1=
7-7=	12-3=	8-4=	16-8=
6-0=	6-6=	9-7=	14-7=
10-6=	13-4=	8-2=	5-2=
11-8=	17-9=	1-0=	3-2=
14-8=	9-3=	4-3=	10-8=

GRADE 5

NAME_____

LESSON FIVE

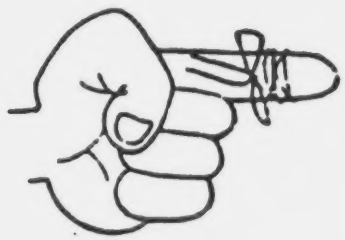
TO THE PARENT: Have your child take the enclosed timed multiplication test. Your child should finish in three minutes. If not there should be drill on these X facts.

In this lesson your child will find products of up to 4 digit numbers X 2 digit numbers.

Remember

$$\begin{array}{r} 348 \\ \times\ 7 \\ \hline \end{array}$$

I.



Step 1

$$\begin{array}{r} {\scriptstyle 5} \\ 348 \\ \times\ 7 \\ \hline 6 \end{array}$$

(7X8=56)

Step 2

$$\begin{array}{r} {\scriptstyle 35} \\ 348 \\ \times\ 7 \\ \hline 36 \end{array}$$

(7X4=28; 28+5=33)

Step 3

$$\begin{array}{r} {\scriptstyle 35} \\ 348 \\ \times\ 7 \\ \hline 2436 \end{array}$$

(7X3=21; 21+3=24)

EXERCISE SET 1:
Please multiply. Some have been worked for you.

1. $\begin{array}{r} {\scriptstyle 4} \\ 35 \\ \times\ 8 \\ \hline 280 \end{array}$

2. $\begin{array}{r} 67 \\ \times\ 4 \\ \hline \end{array}$

3. $\begin{array}{r} 46 \\ \times\ 5 \\ \hline \end{array}$

4. $\begin{array}{r} 62 \\ \times\ 3 \\ \hline \end{array}$

5. $\begin{array}{r} 84 \\ \times\ 6 \\ \hline \end{array}$

6. $\begin{array}{r} 48 \\ \times\ 8 \\ \hline \end{array}$

7. $\begin{array}{r} 66 \\ \times\ 9 \\ \hline \end{array}$

8. $\begin{array}{r} 57 \\ \times\ 7 \\ \hline \end{array}$

9. $\begin{array}{r} {\scriptstyle 52} \\ 683 \\ \times\ 7 \\ \hline 4781 \end{array}$

10. $\begin{array}{r} 941 \\ \times\ 8 \\ \hline \end{array}$

11. $\begin{array}{r} 782 \\ \times\ 6 \\ \hline \end{array}$

12. $\begin{array}{r} 275 \\ \times\ 9 \\ \hline \end{array}$

13. $\begin{array}{r} {\scriptstyle 3} \\ 608 \\ \times\ 4 \\ \hline 2432 \end{array}$

14. $\begin{array}{r} 909 \\ \times\ 5 \\ \hline \end{array}$

15. $\begin{array}{r} 803 \\ \times\ 3 \\ \hline \end{array}$

16. $\begin{array}{r} 509 \\ \times\ 9 \\ \hline \end{array}$

NAME_____

II.

& LOOK

Multiply: 526 X 27

Step 1

$$\begin{array}{r} 526 \\ \times\ 27 \\ \hline 3682 \end{array}$$

Step 2

$$\begin{array}{r} 526 \\ \times\ 27 \\ \hline 3682 \\ 10520 \end{array}$$

Step 3

$$\begin{array}{r} 526 \\ \times\ 27 \\ \hline 3682 \\ 10520 \\ \hline 14,202 \end{array}$$

EXERCISE SET 2:
Please multiply. Some have been worked for you.

1. $\begin{array}{r} 99 \\ \times 25 \\ \hline 495 \\ 1980 \\ \hline 2,475 \end{array}$

2. $\begin{array}{r} 37 \\ \times 18 \\ \hline \end{array}$

3. $\begin{array}{r} 59 \\ \times 74 \\ \hline \end{array}$

4. $\begin{array}{r} 763 \\ \times\ 48 \\ \hline 6104 \\ 30520 \\ \hline 36,624 \end{array}$

5. $\begin{array}{r} 376 \\ \times\ 87 \\ \hline \end{array}$

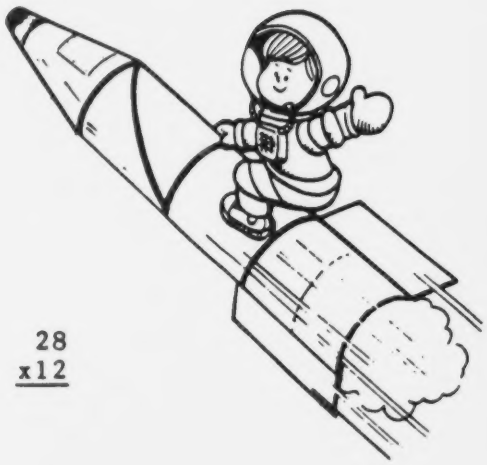
6. $\begin{array}{r} 965 \\ \times\ 64 \\ \hline \end{array}$

7. $\begin{array}{r} 6753 \\ \times\ \ 76 \\ \hline 40518 \\ 472710 \\ \hline 513,228 \end{array}$

8. $\begin{array}{r} 9132 \\ \times\ \ 41 \\ \hline \end{array}$

9. $\begin{array}{r} 5432 \\ \times\ \ 98 \\ \hline \end{array}$

III. Work the multiplication problems below.



1. 35 x26	2. 17 x36	3. 22 x14		
4. 34 x20	5. 138 x 4	6. 19 x32	7. 28 x12	
8. 79 x 9	9. 19 x16	10. 22 x34	11. 17 x26	12. 43 x12
13. 14 x21	14. 28 x10	15. 23 x10	16. 13 x42	17. 18 x16
18. 24 x20	19. 23 x23	20. 32 x23	21. 32 x12	22. 86 x12
23. 93 x27	24. 14 x62	25. 18 x32	26. 14 x72	

MATH FACTS

See how many of these you can answer correctly in 3 minutes. Have someone time you and check your answers. THEN complete the remaining facts. DO NOT MAIL IN.

Math Form Mu-C (Nov '82)

4x0=	8x2=	6x7=	1x3=
7x0=	7x4=	8x5=	6x1=
0x1=	1x6=	5x4=	7x1=
0x3=	5x6=	8x0=	6x5=
8x3=	6x9=	4x3=	0x5=
2x0=	5x7=	3x5=	7x7=
5x0=	2x1=	9x2=	7x6=
4x5=	0x6=	4x7=	3x2=
6x0=	8x7=	2x4=	6x4=
0x8=	9x6=	3x1=	4x2=
4x6=	9x9=	7x9=	5x3=
3x0=	5x8=	0x7=	6x3=
1x9=	4x8=	1x7=	3x6=
4x9=	8x8=	8x4=	3x8=
7x2=	0x0=	5x2=	1x5=
4x1=	9x8=	2x8=	8x1=
4x4=	7x3=	2x7=	6x8=
0x2=	2x5=	1x1=	8x9=
9x4=	3x3=	3x9=	9x7=
5x1=	1x4=	2x3=	5x5=
1x8=	9x0=	1x2=	8x6=
2x6=	6x6=	0x9=	9x3=
7x5=	2x9=	6x2=	3x7=
9x1=	0x4=	1x0=	7x8=
9x5=	2x2=	5x9=	3x4=

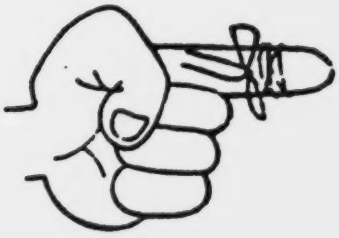
GRADE 5 NAME_____

LESSON SIX

TO THE PARENT: Have your child take the timed division math facts test. Your child should get them correct in three minutes. If not, drill your child on these facts.

Remember

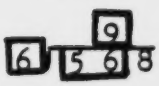
In this lesson your child will divide with one and two digit divisors.



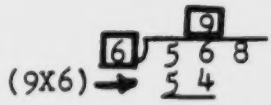
Divide: $568 \div 6$

I.

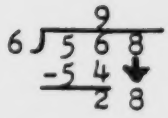
Step 1



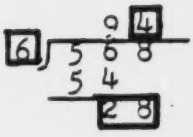
Step 2



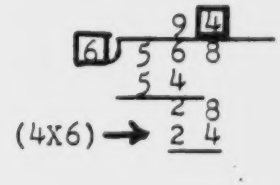
Step 3



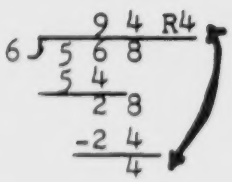
Step 4



Step 5

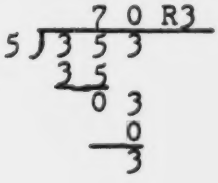


Step 6



EXERCISE SET 1:
Please divide. Some have been worked for you.

1. $5\overline{)353}$ = 70 R3



2. $6\overline{)5541}$

3. $8\overline{)347}$

NAME_____

4. $7\overline{)4313}$ = 616 R1

42
11
7
43
42
1

5. $6\overline{)5541}$

6. $9\overline{)1464}$

Divide: 6820 ÷ 76

Step 1

$7\overline{)6\,|\,6820}$

How many 7's in 68? Try 9.

Step 2

$\begin{array}{r} 9 \\ 76\overline{)6820} \\ 684 \end{array}$

Too big! Try 8.

Step 3

$\begin{array}{r} 8 \\ 76\overline{)6820} \\ -608 \\ 740 \end{array}$

8 is okay multiply 8X76 then subtract and bring down.

Step 4

$\begin{array}{r} 89 \\ 7\overline{)6820} \\ -608 \\ 740 \end{array}$

How many 7's in 74? Try 9.

Step 5

$\begin{array}{r} 89\ R56 \\ 76\overline{)6820} \\ 608 \\ 740 \\ -684 \\ 56 \end{array}$

Multiply 9 X 76.
Subtract.
Remainder is 56

II. NAME_____

EXERCISE SET 2:
Please divide. One has been worked for you.

1. $35\overline{)1412}$

$$\begin{array}{r} 40\ R12 \\ 35\overline{)1412} \\ -140 \\ \hline 12 \\ -\ 0 \\ \hline 12 \end{array}$$

2. $38\overline{)92}$

3. $30\overline{)678}$

4. $65\overline{)592}$

5. $62\overline{)755}$

6. $53\overline{)2938}$

Name _____ Grade ____

MATH FACTS

Math Form DI-C (Rev '82)

See how many of these you can answer correctly in 3 minutes. Have someone time you and check your answers. THEN complete the remaining facts. DO NOT MAIL IN

0÷2=	12÷3=	72÷8=	63÷9=
8÷4=	0÷8=	8÷2=	12÷4=
64÷8=	0÷4=	35÷7=	18÷3=
30÷6=	48÷6=	36÷9=	7÷1=
0÷7=	12÷6=	48÷8=	3÷3=
21÷3=	2÷1=	8÷1=	54÷9=
27÷9=	14÷2=	6÷1=	72÷9=
35÷5=	1÷1=	16÷2=	32÷4=
28÷4=	5÷5=	16÷4=	8÷8=
56÷7=	0÷9=	63÷7=	45÷9=
24÷3=	0÷6=	28÷7=	12÷2=
36÷4=	20÷5=	40÷8=	49÷7=
0÷3=	32÷8=	24÷6=	15÷3=
4÷4=	00÷5=	15÷5=	9÷3=
54÷6=	24÷8=	36÷6=	18÷9=
3÷1=	6÷3=	40÷5=	20÷4=
24÷4=	6÷6=	18÷2=	45÷5=
10÷2=	27÷3=	30÷5=	2÷2=
4÷2=	9÷1=	16÷8=	21÷7=
0÷1=	42÷7=	9÷9=	6÷2=
18÷6=	10÷5=	4÷1=	25÷5=
14÷7=	81÷9=	56÷8=	5÷1=
7÷7=	42÷6=		

Please Divide

1. $36\overline{)864}$

2. $19\overline{)703}$

3. $27\overline{)972}$

4. $34\overline{)782}$

5. $32\overline{)1312}$

6. $65\overline{)4680}$

7. $81\overline{)2997}$

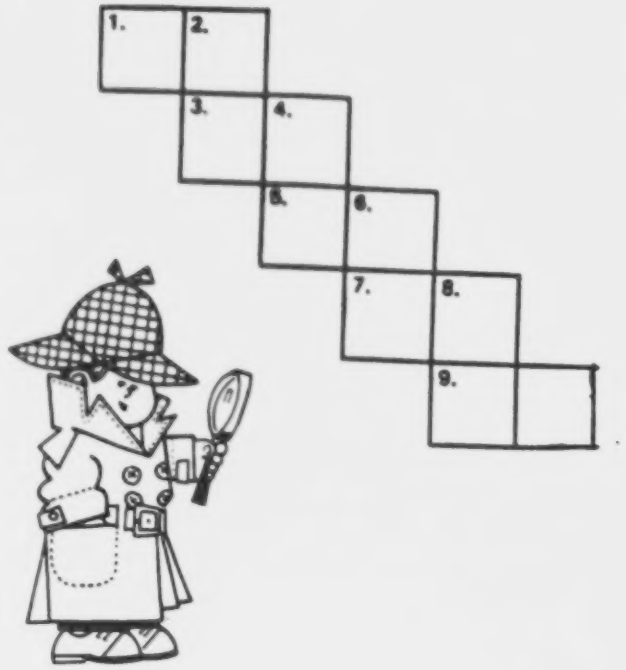
Star Power

8. $92\overline{)2484}$

9. $43\overline{)2709}$

IV. Divide. Use the clues to complete the cross number puzzle.

ACROSS	DOWN
1. 154 ÷ 14	2. 1144 ÷ 88
3. 1184 ÷ 37	4. 1690 ÷ 65
5. 2752 ÷ 43	6. 315 ÷ 7
7. 1767 ÷ 31	8. 3744 ÷ 52
9. 588 ÷ 21	



Find the quotients and remainders!

10. $42\overline{)1786}$ 11. $6\overline{)517}$ 12. $90\overline{)7124}$

13. $36\overline{)509}$ 14. $8\overline{)635}$ 15. $54\overline{)2808}$

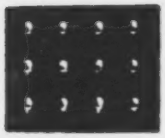
16. $61\overline{)803}$ 17. $10\overline{)907}$

GRADE 5 NAME_____

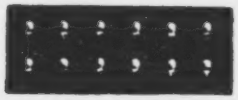
LESSON SEVEN

TO THE PARENT: In this lesson your child will find the greatest common factor (GCF) and the least common multiple (LCM). It is important that your child does not confuse the two.

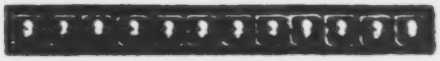
FACTORS



3 × 4 = 12



2 × 6 = 12



1 × 12 = 12

I. The factors of 12 are 1,2,3,4,6,12

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
3 X 5 = 15

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 X 15 = 15

The factors of 15 are 1,3,5,15

The common factors of 12 and 15 are 1 and 3.

The greatest common factor (GCF) of 12 and 15 is 3.

EXERCISE SET 1:
Fill in the table. Some have been worked for you.

	NUMBERS	FACTORS	COMMON FACTORS	GREATEST COMMON FACTOR
	8 12	1,2,4,8 1,2,3,4,6,12	1,2,4	4
1.	16 20	1,2,4,8,16 1,2,4,5,10,20	1,2,4	___
2.	18 27	1,2,3,6,9,18 1,3,9,27	1,3,___	___
3.	14 16	1,2,7,14 1,2,4,8,16	___,___	___
4.	50 75	1,2,5,10,25,50 1,3,5,15,25,75	___,___,___	___
5.	7 9	1,7 1,3,9	___	___

NAME_____

II.

EXERCISE SET 2:
Find the greatest common factor for each pair of numbers.
One has been worked for you.

1. 7 →
   13 →

2. 3 →
   21 →

3. 10 →
   30 →

4. 24 → 1,2,3,4,6,8,12,24
   36 → 1,2,3,4,6,9,12,18,36
   GCF = 12

5. 8 →
   18 →

6. 15 →
   35 →

7. 15 →
   21 →

8. 18 →
   24 →

9. 16 →
   40 → 1,2,4,5,8,10,20,40

III. MULTIPLES

When we multiply a number such as 3 by 0, by 1, by 2,.....
we get multiples of 3.

0 X 3	1 X 3	2 X 3	3 X 3	4 X 3
↓	↓	↓	↓	↓
0	3	6	9	12

(0, 3, 6, 9, 12.....) are multiples of 3

EXERCISE SET 3:

1. **Multiples of 7: {0, 7, 14, □, △, ○, ···}**
2. **Multiples of 6: {0, 6, 12, □, △, ○, ···}**
3. **Multiples of 11: {0, 11, 22, □, △, ○, ···}**
4. **Multiples of 12: {0, 12, 24, □, △, ○, ···}**
5. **Multiples of 8: {□, △, ○, 24, 32, 40, ···}**
6. **Multiples of 9: {□, △, ○, 27, 36, 45, ···}**

(non zero) multiples of 12 are {12, 24, 36, 48, ...}
(non zero) multiples of 18 are {18, 36, 54, 72, ...}
least common multiple (LCM) of 12 and 18 is 36

NAME_____

IV.

EXERCISE SET 4:

List the non zero multiples of each number. Then find the least common multiple for each pair. Two have been worked for you.

1. To find the multiples of 4 multiply 4 by 1, 2, 3, 4, etc. Do the same for 14. Then find the first common multiple.

   4 → 4, 8, 12, 16, 20, 24, 28, 32, 36,.....
   14 → 14, 28, ...

2. 12
   20

3. 9
   15

4. 6
   21

5. 8
   12

6. 10 → 10, 20, 30, 40, 50, 60, 70, 80, 90
   9 → 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

7. 4
   26

8. 6
   96

9. 10
   25

10. 7
    12

11. **Buns come in packages of 8. Hot dogs in packages of 10. What is the least number packages of hot dogs and of buns you should buy so you'll have the same number of buns as hot dogs?**

MATH FACTS

See how many of these you can answer correctly in 3 minutes. Have someone time you and check your answers. THEN complete the remaining facts.

DO NOT MAIL IN.

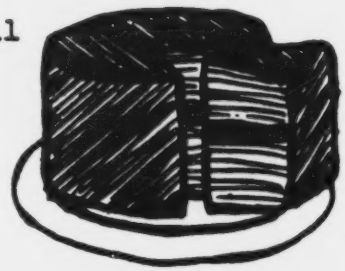
9-1=	10-8=	27÷3=	7+3=
18÷3=	12-5=	64÷8=	54÷9=
5+8=	8x1=	15-6=	8+3=
7+7=	8+7=	11-3=	8x7=
6x9=	24÷4=	8x4=	1+8=
13-6=	0÷5=	16-7=	6+7=
6+5=	17-8=	8+6=	6-6=
56÷8=	8x6=	21÷7=	3x8=
7x6=	9+6=	9x9=	72÷9=
3x4=	5x7=	48÷6=	14-9=
9+8=	63÷9=	4x9=	4÷4=
11-7=	8+0=	14-6=	5+9=
5x9=	15-7=	28÷4=	12-3=
49÷7=	7x3=	7+9=	7x9=
9x8=	6÷1=	0x4=	42÷6=
2+5=	2+8=	18-9=	7x2=
81÷9=	14-7=	10-2=	15-9=
8-7=	9-9=	9x1=	9+9=
6x4=	0÷3=	0÷8=	7÷1=
4+7=	8x5=	9+2=	6-0=
0+8=	4x7=	4+0=	9x3=
5-5=	5+4=	7÷7=	8+1=
16÷2=	15÷5=	4x8=	5x6=
3x6=	0÷6=	10-9=	36÷4=
4+9=	13-9=	7-0=	5+7=

Math Form ASMD Comb-B (Nov '82)

GRADE 5 NAME _____

LESSON EIGHT

TO THE PARENT: In this lesson your child will write equivalent fractions.



Fractions:

1.

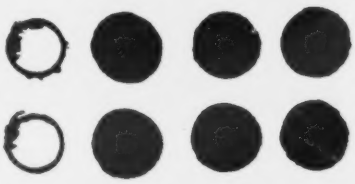
Fractional part eaten

$\frac{3}{5}$

2.

Fractional part of the cup filled

$\frac{3}{4}$

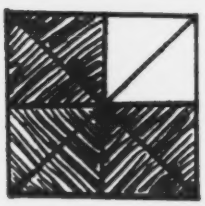
3. 

Fractional part of the marbles that are dark

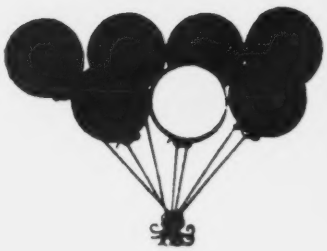
$\frac{6}{8}$

I.

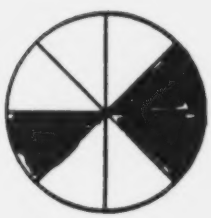
EXERCISE SET 1:
Name the fraction for the part that is shaded.

1. 

2.

3. 

4.

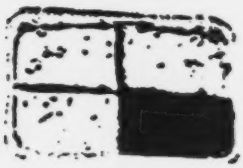
5. 

NAME_____

6. How much of the carton is left?

7. What part has been eaten?
(the light part)

8. What part has been eaten?
(the dark part)



9. What part of the eggs are brown?

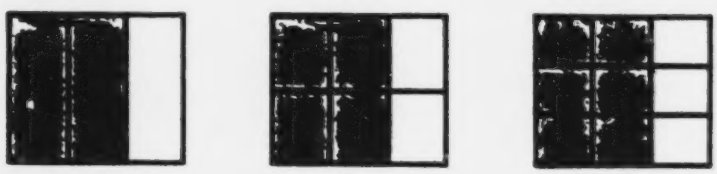
Equivalent fractions name the same number.

II.

$\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$

EXERCISE SET 2:
Study the diagrams and write the equivalent fractions for the shaded parts.

1.

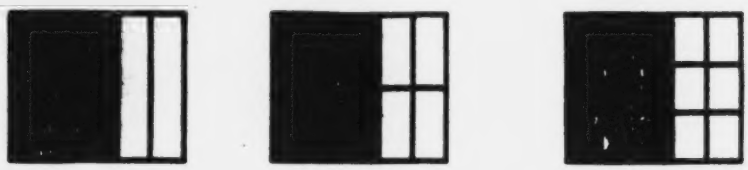


_____ _____ _____

NAME_____

Write equivalent fractions for the shaded parts.

2.



_____ _____ _____

Write two names for the shaded parts. The first one has been done for you.

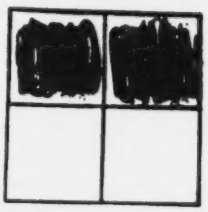
3.

$\frac{6}{9} = \frac{2}{3}$

4.

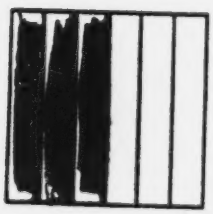
_____ _____

5.



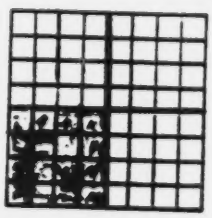
_____ _____

6.



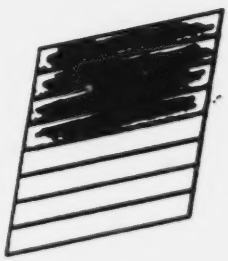
_____ _____

7.



_____ _____

8.



_____ _____

NAME_____

Finding equivalent fractions:

Examples:

$$\frac{2}{3} = \frac{2 \times \boxed{3}}{3 \times \boxed{3}} = \frac{6}{9}$$

$$\frac{2}{3} = \frac{2 \times \boxed{4}}{3 \times \boxed{4}} = \frac{8}{12}$$

$$\frac{1}{2} = \frac{1 \times \boxed{5}}{2 \times \boxed{5}} = \frac{5}{10}$$

III.

$$\frac{3}{8} = \frac{3 \times \boxed{6}}{8 \times \boxed{6}} = \frac{18}{48}$$

EXERCISE SET 3:
Give the missing fractions in each exercise.

1. $\frac{1 \times 1}{3 \times 1}$ $\quad \frac{1}{3} \times \frac{2}{2}$ $\quad \frac{1}{3} \times \frac{3}{3}$ $\quad \frac{1}{3} \times \frac{4}{4}$ $\quad \frac{1}{3} \times \frac{5}{5}$

   $\frac{1}{3}$ $\quad \frac{2}{6}$ $\quad$ ____ $\quad$ ____ $\quad$ ____

2. $\frac{2}{5} \times \frac{1}{1}$ $\quad \frac{2}{5} \times \frac{2}{2}$ $\quad \frac{2}{5} \times \frac{3}{3}$ $\quad \frac{2}{5} \times \frac{4}{4}$ $\quad \frac{2}{5} \times \frac{5}{5}$

   $\frac{2}{5}$ $\quad$ ____ $\quad$ ____ $\quad$ ____ $\quad$ ____

3. $\frac{3}{10} \times \frac{4}{4}$ $\quad \frac{3}{10} \times \frac{10}{10}$ $\quad \frac{3}{10} \times \frac{20}{20}$ $\quad \frac{3}{10} \times \frac{25}{25}$ $\quad \frac{3}{10} \times \frac{100}{100}$

   $\frac{12}{40}$ $\quad$ ____ $\quad$ ____ $\quad$ ____ $\quad$ ____

4. $\frac{3}{4} \times \frac{5}{5}$ $\quad \frac{3}{4} \times \frac{8}{8}$ $\quad \frac{3}{4} \times \frac{25}{25}$ $\quad \frac{3}{4} \times \frac{100}{100}$ $\quad \frac{3}{4} \times \frac{1000}{1000}$

   $\frac{15}{20}$ $\quad$ ____ $\quad$ ____ $\quad$ ____ $\quad$ ____

NAME_____

Find what you must multiply the numerator and denominator by to get the given denominator. Find the numerator.

5. $\frac{4}{5} = \frac{4 \times \boxed{3}}{5 \times \boxed{3}} = \frac{\square}{15}$

6. $\frac{2}{3} = \frac{2 \times \square}{3 \times \square} = \frac{\square}{21}$

7. $\frac{3}{8} = \frac{3 \times \square}{8 \times \square} = \frac{\square}{32}$

8. $\frac{7}{10} = \frac{7 \times \square}{10 \times \square} = \frac{\square}{100}$

9. $\frac{1}{3} = \frac{1 \times \square}{3 \times \square} = \frac{\square}{30}$

10. $\frac{4}{4} = \frac{4 \times \square}{4 \times \square} = \frac{\square}{32}$

Find the numerator.

11. $\frac{1}{2} = \frac{\quad}{12}$

12. $\frac{3}{4} = \frac{\quad}{16}$

13. $\frac{4}{5} = \frac{\quad}{25}$

14. $\frac{5}{8} = \frac{\quad}{16}$

15. $\frac{1}{3} = \frac{\quad}{6}$

16. $\frac{3}{5} = \frac{\quad}{10}$

<u>Finding a common denominator</u>

EXAMPLE 1:
Write equivalent fractions for

$\frac{1}{2}$ and $\frac{3}{8}$ with a common denominator.

Names for $\frac{1}{2} \rightarrow \frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \boxed{\frac{4}{8}}, \frac{5}{10}, \ldots\ldots\ldots$

Names for $\frac{3}{8} \rightarrow \boxed{\frac{3}{8}}, \frac{6}{16}, \ldots\ldots\ldots\ldots$

$\frac{4}{8}$ and $\frac{3}{8}$ have the same denominators.

NAME_____

EXAMPLE 2:
Write equivalent fractions for $\frac{5}{6}$ and $\frac{1}{4}$ with a common denominator.

Names for $\frac{5}{6} \rightarrow \frac{5}{6}, \boxed{\frac{10}{12}}, \frac{15}{18}, \frac{20}{24}, \ldots\ldots\ldots$

Names for $\frac{1}{4} \rightarrow \frac{1}{4}, \frac{2}{8}, \boxed{\frac{3}{12}}$

$\frac{10}{12}$ and $\frac{3}{12}$ have the same denominator.

IV.

EXERCISE SET 4:
Write equivalent fractions with a common denominator for each pair of fractions.

1. $\frac{1}{2} = \frac{2}{4} = \boxed{\frac{3}{6}} = \frac{4}{8}$ $\quad \frac{3}{6}$
   $\frac{2}{3} = \boxed{\frac{4}{6}} = \frac{6}{9} = \quad \frac{4}{6}$

2. $\frac{3}{5}$
   $\frac{3}{4}$

3. $\frac{1}{2}$
   $\frac{3}{10}$

4. $\frac{1}{3}$
   $\frac{3}{4}$

NAME_____

GRADE 5

LESSON NINE

TO THE PARENT: In this lesson your child will reduce fractions and multiply fractions.

$\frac{?}{12} = \frac{?}{4}$

Reducing Fractions to Lowest Terms

$$\frac{9}{12} = \frac{9 \div \boxed{3}}{12 \div \boxed{3}} = \frac{3}{4}$$

1.

EXERCISE SET 1:
Give the fractions in lowest terms.

1. $\frac{4}{10} = \frac{4 \div \square}{10 \div \square} = __$

2. $\frac{8}{32} = \frac{8 \div \square}{32 \div \square} = __$

3. $\frac{12}{20} = \frac{12 \div \square}{20 \div \square} = __$

4. $\frac{10}{12} = \frac{10 \div \square}{12 \div \square} = __$

5. $\frac{16}{42} = \frac{16 \div \square}{42 \div \square} = __$

6. $\frac{6}{21} = \frac{6 \div \square}{21 \div \square} = __$

7. $\frac{15}{40} =$

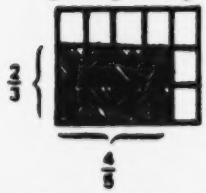
8. $\frac{90}{100} =$

9. $\frac{12}{20} =$

10. $\frac{18}{24} =$

Multiplying Fractions

This drawing shows that $\frac{2}{3}$ of $\frac{4}{5}$ is $\frac{8}{15}$.



EXAMPLE 1: $\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$ Multiply numerators / Multiply denominators

EXAMPLE 2: $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12} = \frac{6 \div \boxed{6}}{12 \div \boxed{6}} = \frac{1}{2}$

NAME_____

II.

Multiplying Fractions
EXAMPLE 3:

$$\boxed{3} \times \frac{1}{8} = \boxed{\frac{3}{1}} \times \frac{1}{8} = \frac{3}{8}$$

EXERCISE SET 2:
Multiply and Reduce

1. $\frac{1}{4} \times \frac{1}{2}$
2. $\frac{1}{2} \times \frac{4}{5}$
3. $\frac{2}{3} \times \frac{3}{8}$
4. $\frac{4}{5} \times \frac{1}{4}$
5. $\frac{1}{10} \times \frac{1}{3}$
6. $\frac{5}{11} \times \frac{2}{3}$
7. $\frac{3}{4} \times \frac{4}{7}$
8. $4 \times \frac{1}{2}$
9. $\frac{1}{10} \times \frac{3}{100}$
10. $\frac{7}{10} \times \frac{2}{5}$
11. $\frac{2}{3} \times \frac{2}{3}$
12. $\frac{1}{4} \times \frac{3}{2}$
13. $\frac{7}{3} \times \frac{1}{2}$
14. $\frac{3}{5} \times \frac{5}{3}$
15. $\frac{1}{8} \times 2$

III. Multiply Down, Multiply Across

X			
	$\frac{1}{2}$	$\frac{2}{3}$	① $\frac{2}{6} = \frac{1}{3}$
X	$\frac{3}{4}$	$\frac{3}{5}$	②
	③	④	

X			
	$\frac{3}{8}$	$\frac{2}{3}$	⑤
X	$\frac{1}{5}$	$\frac{7}{10}$	⑥
	⑦	⑧	⑨

IV. Reduce each fraction to lowest terms. Can you find three answers which are the same?

1. $\frac{4}{10}$ =

2. $\frac{12}{16}$ =

3. $\frac{8}{40}$ =

4. $\frac{6}{36}$ =

5. $\frac{24}{36}$ =

6. $\frac{27}{36}$ =

7. $\frac{15}{65}$ =

8. $\frac{25}{35}$ =

9. $\frac{21}{28}$ =

10. $\frac{20}{22}$ =

11. $\frac{4}{24}$ =

12. $\frac{15}{24}$ =

Please multiply.

1. $\frac{1}{5} \times \frac{3}{8} =$

2. $\frac{1}{4} \times \frac{3}{4} =$

3. $\frac{4}{5} \times \frac{8}{9} =$

4. $\frac{3}{4} \times \frac{1}{7} =$

5. $\frac{2}{5} \times \frac{4}{9} =$

6. $\frac{7}{10} \times \frac{11}{12} =$

7. $\frac{2}{3} \times \frac{5}{7} =$

8. $\frac{4}{5} \times \frac{2}{3} =$

9. $\frac{8}{9} \times \frac{11}{13} =$

10. $\frac{2}{9} \times \frac{8}{11} =$

11. $\frac{1}{3} \times \frac{1}{4} =$

12. $\frac{1}{5} \times \frac{3}{5} =$

GRADE 5 NAME_____

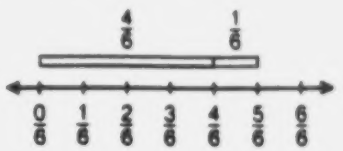
LESSON TEN

SKILLS

TO THE PARENT: In this lesson your child will add both like and unlike fractions.

Adding Like Fractions

EXAMPLE 1: $\frac{4}{6} + \frac{1}{6} =$



EXAMPLE 2:

$$\begin{array}{r} \frac{3}{16} \\ +\ \frac{5}{16} \\ \hline \frac{8}{16} \end{array}$$

denominators same

add the numerators
keep the denominators

I. $\frac{8 \div \boxed{8}}{16 \div 8} = \frac{1}{2}$

EXERCISE SET 1:
Add. Reduce to lowest terms.

1. $\frac{3}{5} + \frac{1}{5} =$ 2. $\frac{3}{8} + \frac{4}{8} =$ 3. $\frac{1}{6} + \frac{2}{6} =$

4. $\frac{3}{5} + \frac{2}{5} =$ 5. $\frac{2}{3} + \frac{2}{3} =$ 6. $\frac{5}{12} + \frac{4}{12} =$

Adding Unlike Fractions

EXAMPLE : $\frac{2}{3} + \frac{1}{12}$

Names for $\frac{2}{3} \rightarrow \left\{\frac{2}{3}, \frac{4}{6}, \frac{6}{9}, \boxed{\frac{8}{12}}, \ldots\ldots\ldots\ldots\right\}$

$\boxed{\frac{1}{12}}$

$$\begin{array}{r} \frac{2}{3} = \frac{8}{12} \\ +\ \frac{1}{12} = \frac{1}{12} \\ \hline \frac{9}{12} \text{ or } \frac{3}{4} \end{array}$$

NAME_____

Adding Unlike Fractions

EXAMPLE 2: $\frac{1}{6} + \frac{3}{8}$

Names for $\frac{1}{6} \longrightarrow \left\{\frac{1}{6}, \frac{2}{12}, \frac{3}{18}, \boxed{\frac{4}{24}}, \ldots\ldots\ldots\right\}$

Names for $\frac{3}{8} \longrightarrow \left\{\frac{3}{8}, \frac{6}{16}, \boxed{\frac{9}{24}}, \ldots\ldots\ldots\ldots\right\}$

II.

$$\begin{array}{r} \frac{1}{6} = \frac{4}{24} \\ +\ \frac{3}{8} = \frac{9}{24} \\ \hline \frac{13}{24} \end{array}$$

EXERCISE SET 2
Add and simplify.

1. $\begin{array}{r} \frac{3}{4} \\ +\ \frac{1}{12} \\ \hline \end{array}$

2. $\begin{array}{r} \frac{2}{3} \\ +\ \frac{1}{12} \\ \hline \end{array}$

3. $\begin{array}{r} \frac{1}{3} \\ +\ \frac{5}{7} \\ \hline \end{array}$

4. $\begin{array}{r} \frac{1}{3} \\ +\ \frac{4}{9} \\ \hline \end{array}$

5. $\begin{array}{r} \frac{1}{6} \\ +\frac{1}{2} \\ \hline \end{array}$

6. $\begin{array}{r} \frac{5}{8} \\ +\ \frac{1}{4} \\ \hline \end{array}$

7. $\begin{array}{r} \frac{3}{4} \\ +\ \frac{1}{2} \\ \hline \end{array}$

8. $\begin{array}{r} \frac{3}{5} \\ +\ \frac{4}{15} \\ \hline \end{array}$

9. $\frac{3}{5} + \frac{3}{10}$

10. $\frac{1}{3} + \frac{3}{8}$

NAME_____

III. EXERCISE SET 3:

Add the fractions below. Put your answers on the answer sheet. Don't forget! Reduce your answers to lowest terms.

1. $\frac{1}{4} + \frac{5}{8} = \frac{6}{24} + \frac{15}{24} = \frac{21}{24} = \frac{7}{8}$

2. $\frac{1}{2} + \frac{3}{4} =$

3. $\frac{3}{8} + \frac{13}{16} =$

4. $\frac{1}{4} + \frac{3}{8} =$

5. $\frac{7}{8} + \frac{3}{4} =$

6. $\frac{13}{16} + \frac{1}{2} =$

7. $\frac{1}{4} + \frac{9}{16} =$

8. $\frac{5}{8} + \frac{3}{16} =$

9. $\frac{3}{4} + \frac{7}{16} =$

10. $\frac{5}{16} + \frac{3}{8} =$

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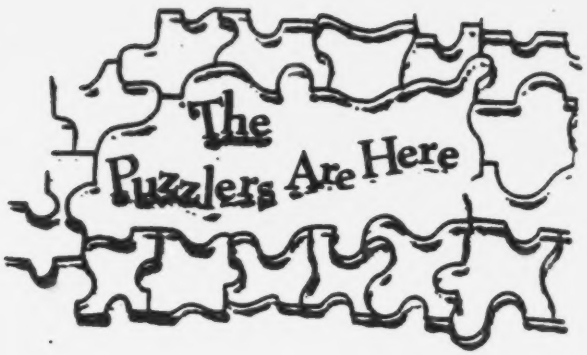
IV.



Add across. Add down.

+			
+	$\frac{1}{2}$	$\frac{3}{5}$	① $\frac{11}{10}$
	$\frac{2}{5}$	$\frac{1}{2}$	②
	③	④	⑤

+			
+	$\frac{7}{10}$	$\frac{1}{2}$	⑥
	$\frac{3}{5}$	$\frac{1}{10}$	⑦
	⑧	⑨	⑩

+			
+	$\frac{1}{3}$	$\frac{5}{6}$	⑪
	$\frac{1}{2}$	$\frac{1}{6}$	⑫
	⑬	⑭	⑮

GRADE 5 NAME_____

LESSON ELEVEN

TO THE PARENT: In this lesson your child will subtract fractions with like and unlike denominators.

Subtracting Fractions with Like Denominators

EXAMPLE 1: $\frac{3}{4} - \frac{1}{4} =$

$$\begin{array}{r} \frac{3}{4} \\ -\frac{1}{4} \\ \hline \frac{2}{4} \end{array}$$ 3 - 1

EXAMPLE 2: $\frac{5}{6} - \frac{1}{6} =$

$$\begin{array}{r} \frac{5}{6} \\ -\frac{1}{6} \\ \hline \frac{4}{6} \end{array}$$

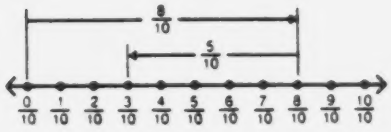
denominators are the same

subtract the numerators
keep the common denominators

$\frac{4}{6} = \frac{2}{3}$

I.

EXERCISE SET 1:
Subtract and simplify.

1. 

$\frac{8}{10} - \frac{5}{10} = \frac{\quad}{10}$

2. $\frac{7}{8} - \frac{1}{8} =$

3. $\frac{11}{16} - \frac{7}{16} =$

4. $\frac{6}{7} - \frac{2}{7} =$

5. $\begin{array}{r} \frac{7}{10} \\ -\frac{3}{10} \\ \hline \end{array}$

6. $\begin{array}{r} \frac{11}{12} \\ -\frac{6}{12} \\ \hline \end{array}$

NAME_____

7. John had $\frac{7}{8}$ yard of wool. He used $\frac{5}{8}$ yard to make a vest. How much did he have left?

8. Nancy had $\frac{5}{6}$ of a pie. She ate $\frac{1}{6}$. How much was left?

II. Subtract, please.

1. $\frac{5}{7} - \frac{2}{7}$

2. $\frac{14}{17} - \frac{3}{17}$

3. $\frac{19}{25} - \frac{13}{25}$

4. $\frac{14}{37} - \frac{1}{37}$

5. $\frac{39}{100} - \frac{26}{100}$

6. $\frac{4}{5} - \frac{1}{5}$

7. $\frac{7}{8} - \frac{2}{8}$

8. $\frac{10}{13} - \frac{1}{13}$

9. $\frac{3}{4} - \frac{2}{4}$

10. $\frac{5}{6} - \frac{4}{6}$

11. $\frac{9}{10} - \frac{2}{10}$

12. $\frac{17}{21} - \frac{4}{21}$

Find the one numerator which is an even number.

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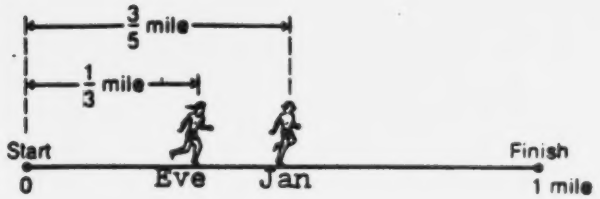
III. Subtracting Fractions with Unlike Denominators

EXAMPLE 1:



Jan is how much ahead of Eve?

$\frac{3}{5} - \frac{1}{3}$

$\frac{3}{5} \longrightarrow \left\{\frac{3}{5}, \frac{6}{10}, \boxed{\frac{9}{15}}, \right\}$ $\quad \frac{3}{5} = \frac{9}{15}$

$\frac{1}{3} \longrightarrow \left\{\frac{1}{3}, \frac{2}{6}, \frac{3}{9}, \frac{4}{12}, \boxed{\frac{5}{15}}\right\}$ $\quad -\frac{1}{3} = \frac{5}{15}$

$\frac{4}{15}$

So Eve is $\frac{4}{15}$ mi. ahead of Jan.

EXERCISE SET 2:
Subtract. Simplify if possible.

1. $\frac{11}{12} = \frac{11}{12}$
$-\frac{3}{4} = \frac{9}{12}$
$\frac{2}{12}$ or $\frac{1}{6}$

2. $\frac{3}{4}$
$-\frac{7}{16}$

3. $\frac{7}{10}$
$-\frac{2}{5}$

4. $\frac{3}{4}$
$-\frac{1}{3}$

5. $\frac{5}{6} - \frac{1}{2} =$

6. $\frac{5}{9} - \frac{1}{3} =$

7. $\frac{3}{5} - \frac{1}{6} =$

8. $\frac{1}{2} - \frac{1}{3} =$

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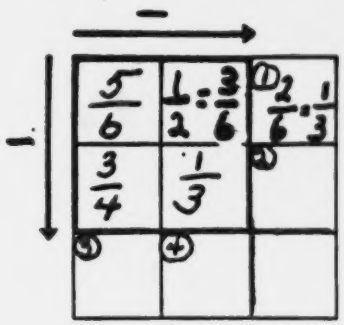
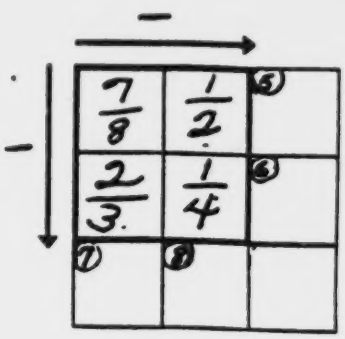
IV. **Subtract across.** Subtract down.





Subtract the fractions below.
Put your answers on the answer sheet.

1. $\frac{5}{16} - \frac{3}{16} =$

2. $\frac{3}{8} - \frac{1}{4} = \frac{3}{8} - \frac{2}{8} = \frac{1}{8}$

3. $\frac{5}{8} - \frac{9}{16} =$

4. $\frac{3}{4} - \frac{1}{16} =$

5. $\frac{1}{2} - \frac{3}{16} =$

6. $\frac{7}{8} - \frac{1}{2} =$

7. $\frac{1}{4} - \frac{1}{8} =$

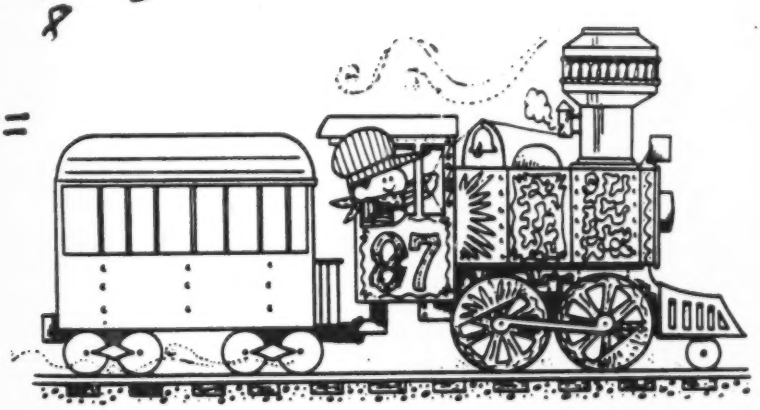
8. $\frac{3}{4} - \frac{11}{16} =$

9. $\frac{5}{8} - \frac{1}{2} =$

10. $\frac{15}{16} - \frac{1}{4} =$

11. $\frac{11}{16} - \frac{3}{8} =$

12. $1 - \frac{3}{8} =$

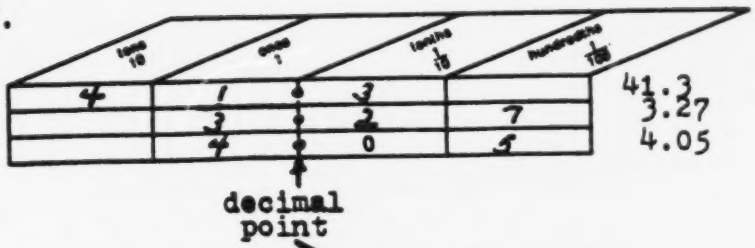


GRADE 5 NAME_____

LESSON TWELVE

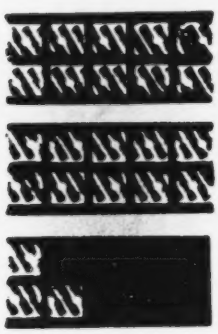
TO THE PARENT: In this lesson your child will read and write decimal fractions.

I.



41.3
3.27
4.05

41.3 forty-one and three tenths
3.27 three and twenty-seven hundredths
4.05 four and five hundredths



$2\frac{3}{10} = 2.3$

EXERCISE SET 1:
Please write each decimal as a word statement.

1. 3.4_____
2. 14.18 fourteen and eighteen hundredths
3. 20.02 _____
4. 2.65 _____
5. 4.50 _____

NAME_____

6. 4.7 _____

7. 5.06 _____

8. 37.61 _____

9. 7.9 _____

10. 0.36 _____

II. Writing Decimals: Tenths and Hundredths Name: _____

Write the missing numbers.

1. .42 = 42 hundredths
2. .18 = _____ hundredths
3. .7 = _____ tenths
4. .10 = _____ hundredths
5. .01 = _____ hundredth
6. .11 = _____ hundredths
7. .86 = _____ hundredths
8. .03 = _____ hundredths
9. .33 = _____ hundredths
10. .5 = _____ tenths
11. .67 = _____ hundredths
12. .84 = _____ hundredths
13. .75 = _____ hundredths
14. .61 = _____ hundredths
15. .8 = _____ tenths
16. .80 = _____ hundredths
17. .08 = _____ hundredths
18. .40 = _____ hundredths
19. .04 = _____ hundredths
20. .4 _____ tenths

For each exercise, write a decimal.

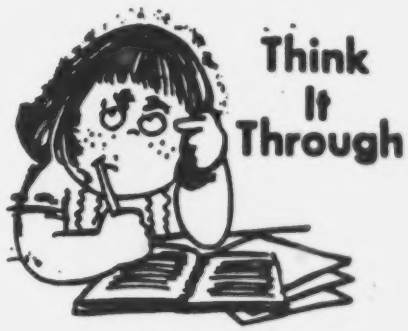
21. 4 hundredths .04
22. 81 hundredths _____
23. 10 hundredths _____
24. 6 and 31 hundredths _____
25. 5 and 8 tenths _____
26. 5 and 80 hundredths _____
27. 36 and 7 hundredths _____
28. 75 and 12 hundredths _____
29. 60 and 3 hundredths _____
30. 541 and 18 hundredths _____
31. one tenth _____
32. ten hundredths _____
33. nine and one hundredth _____
34. nine and one tenth _____
35. forty six and seven hundredths _____
36. fifty and fifty hundredths _____
37. twenty six and one hundredth _____
38. ten and thirty nine hundredths _____
39. one and forty eight hundredths _____
40. twenty nine and three tenths _____

GRADE 5

NAME_____

LESSON THIRTEEN

TO THE PARENT: In this lesson your child will add and subtract decimal fractions. Emphasize that your child must line up the decimal points before adding or subtracting.



I. Addition of Decimals

EXAMPLES:

1. Add 4.68, 15, and 22.3

Step 1 Rewrite in vertical form with the decimal points written directly under each other.

```
 4.68
15.00
22.30
```

NOTE: A whole number has the decimal point after the last digit.

Step 2 Add as with whole numbers.

```
 4.68
15.00
22.30
41.98
```

2. Henry bought a fielder's glove for $15.49, a bat for $4.79, and a baseball for $2.19. How much did he spend altogether?

```
$15.49
  4.79
  2.19
$22.47
```

line up the decimal points

EXERCISE SET:
Add.

1. $\begin{array}{r} 7.5 \\ +\ 1.3 \\ \hline \end{array}$

2. $\begin{array}{r} 2.5 \\ 13.7 \\ +\ 8.9 \\ \hline \end{array}$

3. $\begin{array}{r} 3.0 \\ 11.8 \\ +\ .76 \\ \hline \end{array}$

4. $4.89 + $9.16

5. $4.54 + 45.4$

6. Joni bought a jersey for $11.29, and cap for $8.99. How much did she spend?

II. Find the sums. Line up the numbers by using the decimal points provided. All the answers are palindromes. Palindromes read the same forwards & backwards.

1. 5.7+.9=

.9

2. 7.2+.027=

3. 2.5+6+.3=

4. 7+.91+12=

5. .087+4.7+2+63.2+9=

6. .461+6.3+9+.4=

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III. Subtraction of Decimals

EXAMPLES:

1. Find 9.36 - 3.1

   Step 1 Line up the decimal points.

   $$\begin{array}{r} 9.36 \\ -\ 3.1 \end{array}$$

   Step 2 Subtract.

   $$\begin{array}{r} 9.36 \\ -3.1 \\ \hline 6.26 \end{array}$$

2. Find 8.7 - 2.33

   Step 1 Line up decimal points.

   $$\begin{array}{r} 8.7 \\ -\ 2.33 \end{array}$$

   Step 2 Annex zeros

   $$\begin{array}{r} 8.70 \\ -\ 2.33 \end{array}$$

   Step 3 Subtract.

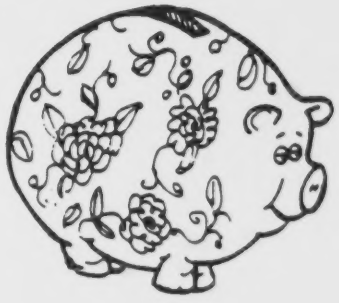
   $$\begin{array}{r} 8.70 \\ -\ 2.33 \\ \hline 6.37 \end{array}$$

3. Tom bought a catcher's mask for $18.98. He gave the clerk a $20 bill. What was his change?

   $$\begin{array}{r} \$20.00 \\ -\ 18.98 \\ \hline \$\ 1.02 \end{array}$$

   annex zeros

   To received $1.02 change.



EXERCISE SET:
Subtract.

1. $\begin{array}{r} 6.7 \\ -\ 3.5 \end{array}$
2. $\begin{array}{r} 6.28 \\ -\ 3.76 \end{array}$
3. $\begin{array}{r} 9.33 \\ -\ 7.5 \end{array}$
4. $\begin{array}{r} 6.3 \\ -\ .7 \end{array}$

5. 32.7 - 19.73
6. 11.6 - 3.79

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7. The barometric pressure before the tornado was 29.34 in. and during the tornado was 27.44 in. By how much did the pressure change?

8. Helen bought a notebook for $5.39. She gave the clerk $10. How much change should she receive?

IV. Subtract.

Bozo says all answers have a seven.

1. .9−.2=

2. .93−.26=

3. 63.2−15.7=

4. .009−.002=

5. 632.01−260.09=

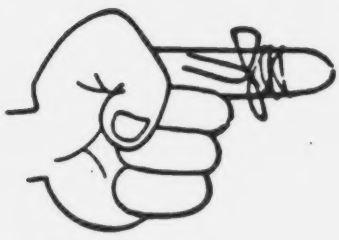
6. 61.7−54.3=

7. 5.73 −4.98 =

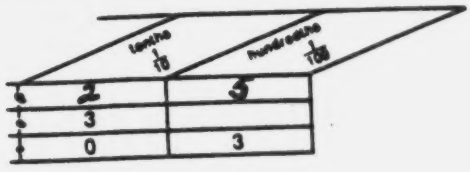
GRADE 5 NAME_____

LESSON FOURTEEN

TO THE PARENT: In this lesson your child will express common fractions as decimal fractions and decimal fractions to dommon fractions.



Changing Decimal Fractions to Common Fractions



$0.25 = \frac{25}{100} = \frac{25 \div 25}{100 \div 25} = \frac{1}{4}$

$0.3 = \frac{3}{10}$

$0.03 = \frac{3}{100}$

I. Write as fractional parts of a dollar. Reduce to lowest terms.

1. _____ 2. _____ $\frac{5}{100} = \frac{1}{20}$ 3. _____

II. **EXERCISE SET:**
Write as common fractions. Reduce to lowest terms.

1. 0.04 : $\frac{4}{100} = \frac{1}{25}$
2. 0.29 : $\frac{29}{100}$
3. 0.35
4. 0.08
5. 0.7
6. 0.12

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7. 0.09 8. 0.2 9. 0.46

10. 0.25 11. 0.1 12. 0.44

13. $3.05 = 3\frac{5}{100} = 3\frac{1}{20}$ 14. 5.9

15. 1.8 16. 2.25

III. Changing Common Fractions to Decimal Fractions

EXAMPLES:

$\frac{1}{5} = \frac{1 \times \boxed{2}}{5 \times \boxed{2}} = \frac{2}{10} = .2$ change denominator to 10

$\frac{3}{4} = \frac{3 \times \boxed{25}}{4 \times \boxed{25}} = \frac{75}{100} = .75$ change denominator to 100

$\frac{3}{20} = \frac{3 \times \boxed{5}}{20 \times \boxed{5}} = \frac{15}{100} = .15$ Change denominator to 100

EXERCISE SET:
Fill in the boxes.

1. $\frac{17}{50} = \frac{17 \times \boxed{2}}{50 \times \boxed{2}} = \frac{\boxed{34}}{100} = .34$

2. $\frac{13}{25} = \frac{13 \times \boxed{}}{25 \times \boxed{}} = \frac{\boxed{}}{100} =$

3. $\frac{1}{2} = \frac{1 \times \boxed{}}{2 \times \boxed{}} = \frac{\boxed{}}{10} =$

4. $\frac{1}{5} = \frac{1 \times \boxed{}}{5 \times \boxed{}} = \frac{\boxed{}}{10} =$

NAME _____

5. $\frac{19}{20} = \frac{19 \times \square}{20 \times \square} = \frac{\square}{100} =$

6. $\frac{1}{4} = \frac{1 \times \square}{4 \times \square} = \frac{\square}{100} =$

Write each fraction as a decimal.

7. $\frac{11}{25} = \frac{44}{100} = .44$

8. $\frac{9}{20} = \frac{}{100} =$

9. $\frac{9}{10} =$

10. $\frac{4}{5} = \frac{}{10} =$

11. $4\frac{1}{2} = 4\frac{}{10} =$

12. $\frac{7}{100} =$

13. $\frac{13}{100} =$

14. $2\frac{3}{10} =$

15. $\frac{3}{25} = \frac{}{100} =$

16. $3\frac{3}{4} = 3\frac{}{100} =$

17. $\frac{2}{5} =$

18. $1\frac{1}{2} =$

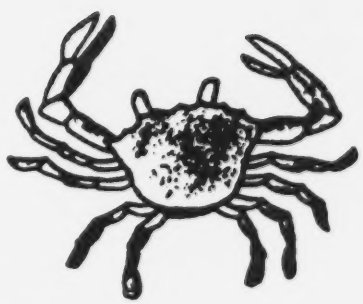
19. $\frac{9}{100} =$

20. $\frac{3}{10} =$

21. $2\frac{7}{10} =$

22. $5\frac{7}{100} =$

23. Two appendages of the crab are pinchers. Give a fraction and decimal to show $\frac{\text{pinchers}}{\text{total appendages}}$.

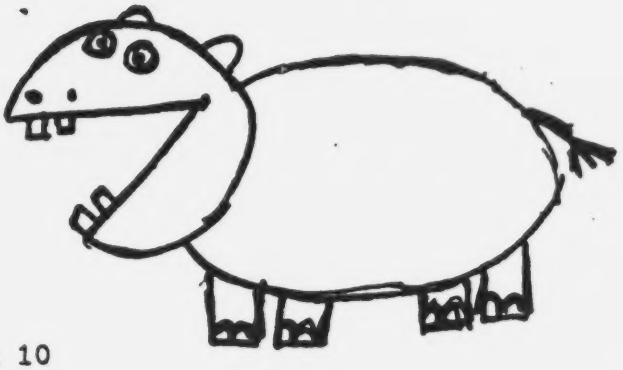


GRADE 5 NAME_____

LESSON FIFTEEN

TO THE PARENT:
In this lesson your child will compare the values of decimal fractions using $<$, $>$, or =.

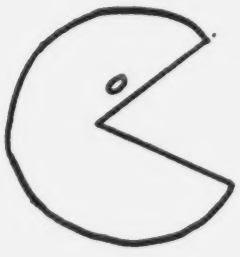
REMEMBER!!!!!
Harry, the Hippo and PAC MAN take the biggest bite.



I. $7 < 10$ 7 is less than 10

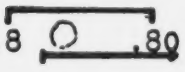
$.32 > .3$ $\frac{32}{100}$ is greater than $\frac{3}{10}$ or $\frac{30}{100}$

$.3 = .30$ $\frac{3}{10}$ is equal to $\frac{30}{100}$

.8  .82

EXAMPLES:

Compare the decimals using $<$, $>$, or =.



compare tenths, both 8

compare hundredths, both 0

$.8 = .80$

I. Continued. NAME_____

.080 .8

compare tenths 0 < 8

.08 .8

.280 .21

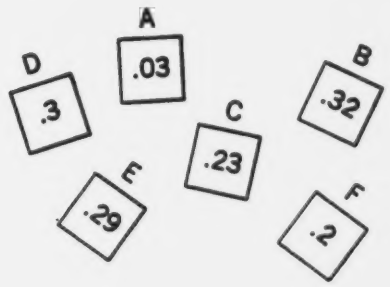
compare tenths, both 2

compare hundredths, 8 > 1

.28 > .21

Exercise Set 1:

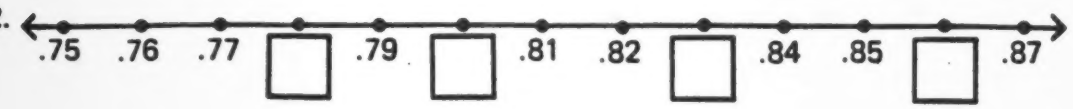
Arrange these in order from SMALLEST to LARGEST.



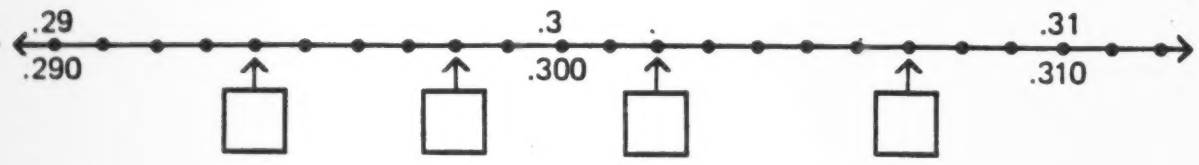
II. EXERCISE SET 2:

Insert the Missing Decimals:

1.

2. 

3.

4. 

Continue the Pattern:

5. 6.5 6.6 6.7 6.8 ☐ ☐ ☐

6. .38 .39 .40 .41 ☐ ☐

7. .706 .707 .708 ☐ .710 ☐

8. 10.897 10.898 10.899 ☐ ☐ ☐

9. .081 .083 .085 ☐ ☐ ☐

EXERCISE SET 3:

III. **Equal Decimals**

Circle the number that is not equal to the other numbers. Write number on answer sheet.

1. .700
   .7
   .070

2. .3
   .30
   .003

3. .90
   .009
   .900

4. .600
   .060
   .60

5. .002
   .020
   .02

6. .070
   .7
   .700

7. .40
   .040
   .4

8. .05
   .50
   .500

9. .08
   .080
   .008

10. 8.25
    8.250
    8.205

11. .72
    .702
    .720

12. 9.30
    9.300
    9.030

13. 4.70
    4.007
    4.700

14. 6.400
    6.040
    6.04

15. 4.07
    4.070
    4.007

16. 32.015
    32.150
    32.15

17. 48.29
    48.290
    48.029

18. 29.130
    29.103
    29.13

EXERCISE 4:

IV. **Comparing Decimals**

Compare the decimals. Use >, < or =.

1. .9 .90
2. .68 > .4
3. .27 .5
4. .3 .38
5. .8 .08
6. .30 .3
7. .18 .180
8. .618 .573
9. .07 .300
10. .400 .004
11. .35 .352
12. .098 .9
13. .02 .012
14. .070 .59
15. .5 .07

GRADE 5

NAME_____

LESSON SIXTEEN

TO THE PARENT: In this lesson your child will measure using a centimeter and inch ruler. You will find a ruler in this packet. The measurements given are both in the Metric System and the Customary System.

I. Name these measuring tools.

A. _____

B. _____

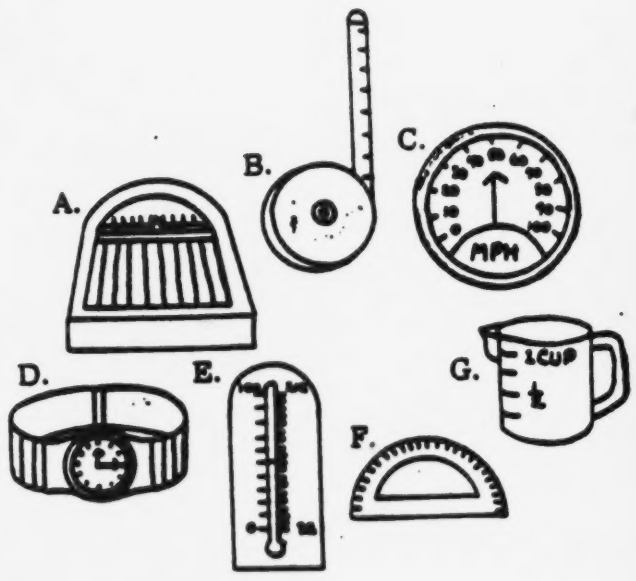
C. _____

D. _____

E. _____

F. _____

G. _____



Measurement Devices
Can you name them?

Customary System

12 inches = 1 foot

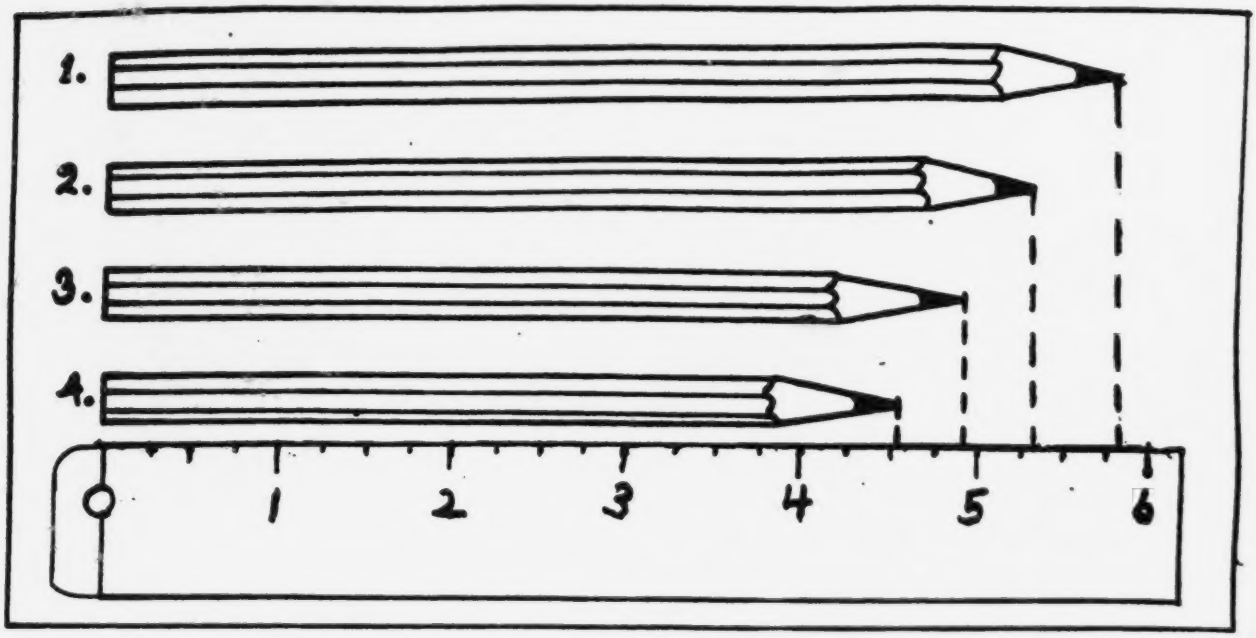
3 feet = 1 yard

NAME _____

II. **Using a Ruler**

Place the zero mark at the end of the object to be measured.

Measure these pencils to the nearest $\frac{1}{4}$ inch.



1. $5\frac{3}{4}$ IN 2. _____ 3. _____ 4. _____

Use your ruler to measure these to the nearest $\frac{1}{4}$ inch.

5. 6. 7.

5. _____ 6. _____ 7. _____

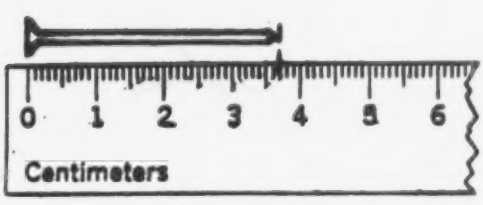
NAME_____

III. Use a tape measure to measure the following to the nearest $\frac{1}{4}$ inch.

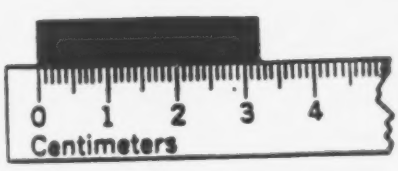
1. Your height_____
2. Around your wrist_____
3. Around your neck_____
4. Around your ankle_____
5. Length of your foot_____
6. Length of a book_____
7. A comb_____
8. Length of your thumb_____

IV. METRIC SYSTEM

The centimeter (cm) ruler is divided into 10 equal parts called millimeters (mm).



37 mm



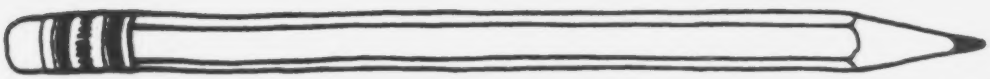
How many mm? 32 mm

Measure the following to the nearest cm.

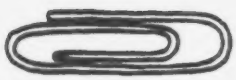
1. _____cm

2. _____cm

NAME_____

3. 

_____cm

4. 

_____cm

5. The width of this paper.

_____cm

6. Your height _____cm

7. Length of your foot_____cm

8. Length of your thumb_____cm

GRADE 5

NAME_____

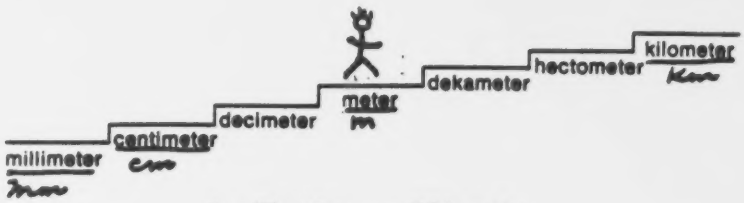
LESSON SEVENTEEN

TO THE PARENT: In this lesson your child will make conversions within the metric system.

Can you think of a word which begins with "cent" and means $\frac{1}{100}$?

Can you think of a word that begins with "mill" and means $\frac{1}{1000}$?

Think of the metric units of length as a staircase.



1 millimeter = .001 meter
1 centimeter = .01 meter
1 decimeter = .1 meter
1 dekameter = 10 meters
1 hectometer = 100 meters
1 kilometer = 1,000 meters

I.

Moving down multiply!

Each step is 10 times the one which preceeds it. A centimeter (cm) is 10 times a millimeter (mm). The kilometer (km) is on the third step from the meter and is 1000 times a meter (m).

EXAMPLES: (count the steps)

7km = 1000 X 7m = 7,000m
12cm = 10 X 12mm = 120mm
8m = 100 X 8cm = 800mm

EXERCISE SET 1

1. 1m = _____cm
2. 1km = _____m
3. 5m = 5X100=500cm
4. 11km = _____m
5. 1cm = _____mm
6. 1m = _____mm
7. 5.5cm= _____mm
8. 7m = _____mm

NAME_____

II. **Moving up divide!**

For one step up you divide by 10, 2 steps divide by 100, 3 steps divide by 1000.

EXAMPLES:

2000mm = ___?___m
(three steps up)

2000 ÷ 1000 = 2m

40 mm = ___?___cm = $\frac{40cm}{10}$ = 4cm

8000m = ___?___km = $\frac{8000m}{1000}$ = 8km

EXERCISE SET 2

1. 70mm = _____cm
2. 500cm = _____m
3. 9000m = _____km
4. 4000mm = $\frac{4000}{1000} = 4$ m
5. 300cm = _____m
6. 75,000m = _____km
7. 4000cm = _____m
8. 2500mm = _____cm

III. CONVERTING TO SMALLER OR LARGER UNITS OF LENGTH

a. 3.79 km = _____ m

Think, km is a larger unit than m so you must multiply.
Count the steps down from km to m. There are 3 so multiply by 1,000
3.79 km X 1,000 = 3,790 m

b. 8.7 mm = _____ cm

Think mm is smaller than cm so you divide.
There is one step so divide by 10
8.7 mm ÷ 10 = .87

HINT: To convert to a smaller unit, multiply by 10, 100 or 1,000.
To convert to a larger unit, divide by 10, 100 or 1,000.

c. 10,101 m = _____ km

m is smaller than km so you divide.
There are 3 steps so divide by 1,000
10,101 m ÷ 1,000 = 10.101 km

d. 0.29 km = _____ cm

km is larger - multiply
There are 5 steps
0.29 km X 100,000 = 29,000 cm

Complete.

1. 7.01 m = 7.01 = 701 cm
2. 4,000 cm = 4000 = 40 m
3. 0.68 cm = _____ mm
4. 3,000 mm = _____ m
5. 0.27 m = _____ dm
6. 909.8 cm = _____ m
7. 60.4 m = _____ cm
8. 5,389 m = _____ km
9. 422 m = _____ km
10. 22.5 m = _____ km
11. 0.53 km = _____ m
12. 0.017 m = _____ mm
13. 14 dm = _____ cm
14. 89 cm = _____ m
15. 4,300 cm = _____ dm
16. 213 mm = _____ cm
17. 0.65 m = _____ mm
18. 0.03 cm = _____ mm
19. 7.1 cm = _____ mm
20. 32.6 km = _____ m
21. 9.2 km = _____ m
22. 0.34 km = _____ cm
23. 8,475 mm = _____ cm
24. 6.5 m = _____ cm

IV. CHOOSING THE BEST UNIT OF LENGTH

Write meter(s), centimeter(s), millimeter(s), or kilometer(s) in each blank so that the sentence makes sense.

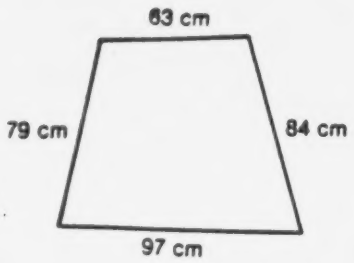
1. Jane said, "Last year on vacation we traveled more than 2500 _____ in our car."
2. The Hogan's swimming pool is 2.5 _____ deep.
3. My new pencil is 18 _____ long.
4. The hot dogs I buy are 22 _____ long.
5. This crisp cracker is 3 _____ thick
6. Joan, my friend in the sixth grade, is 152.4 _____ tall.
7. John's old car has been driven more than 100,000 _____.
8. This driveway is 20.8 _____ long and 7.9 _____ wide.
9. My father's arm is almost one _____ long.
10. This page is 21.5 _____ wide.
11. The bee is _____ long.
12. The marathon race course is 31.5 _____ long.
13. The jump rope used at recess time was 235 _____ long.
14. Many ants are about seven _____ in length.
15. Matilda ran almost 250 _____ across the parking lot.

GRADE 5

NAME _____

LESSON EIGHTEEN

TO THE PARENT: In this lesson your child will find perimeters. Remind your child that pe rim eter is the distance around a figure.



I.

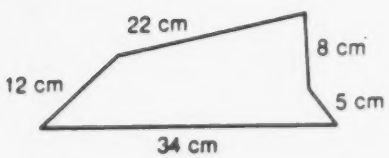
To find the perimeter add the lengths of the sides.

63 cm
84 cm
97 cm
+ 79 cm
323 cm

The perimeter = 323 cm

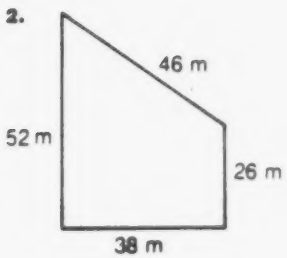
Find the perimeters.

1.



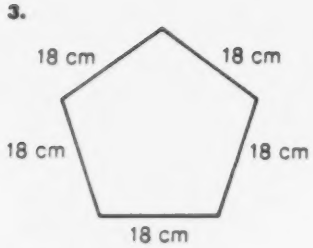
P = _____

2.



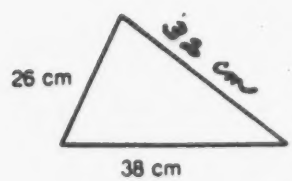
P = _____

3.



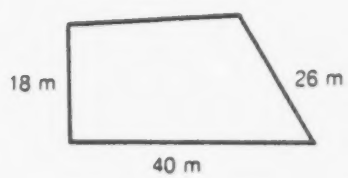
P = _____

4.



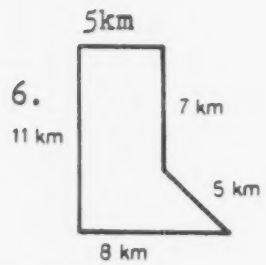
P = _____

5.



P = _____

6.



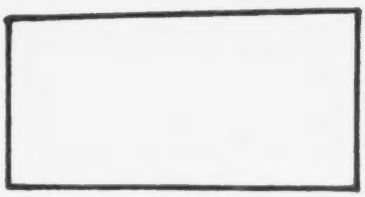
P = _____

NAME _____

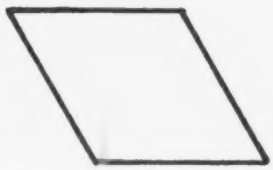
Measure these with your centimeter ruler to the nearest mm and then find the perimeter.

7.

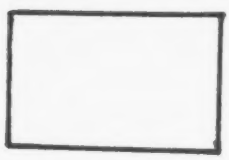
P = _____

8. 

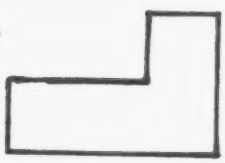
P = _____

9. 

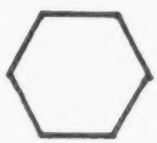
P = _____

10. 

P = _____

11. 

P = _____

12. 

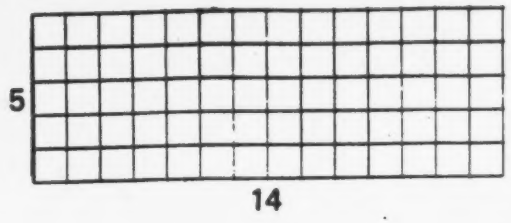
P = _____

II.

Finding the Perimeter of a Rectangle

name_____

The perimeter of a rectangle is the sum of the lengths of its sides.

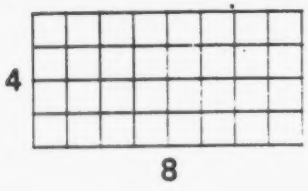


5 + 14 + 5 + 14 = 38

The perimeter of the above rectangle is 38 units.

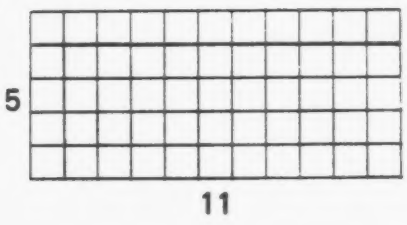
Find the following perimeters.

1.



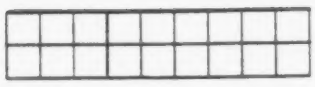
_____

2.



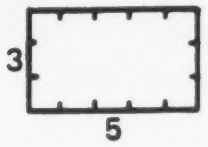
_____

3.



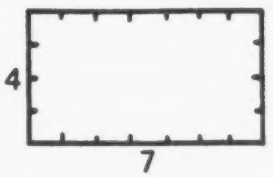
_____

4.



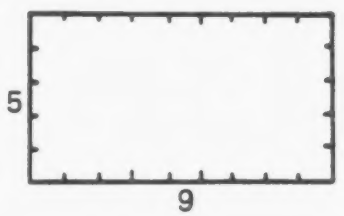
_____

5.



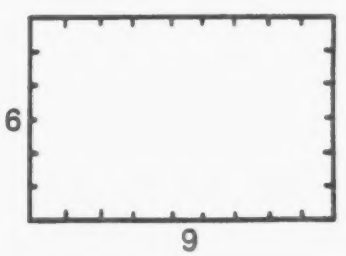
_____

6.



_____

7.



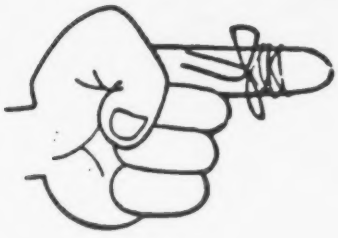
_____

GRADE 5 NAME_____

LESSON NINETEEN

TO THE PARENT: In this lesson your child will find areas of squares and rectangles.

Emphasize that area is what is contained inside a figure.

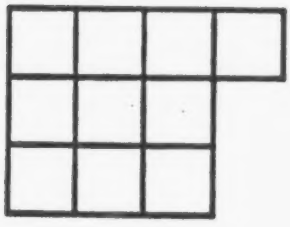


Area is measured in <u>square units</u>.

Count the squares in these figures. Each square is a square centimeter.

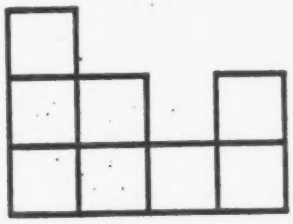
I.

1.



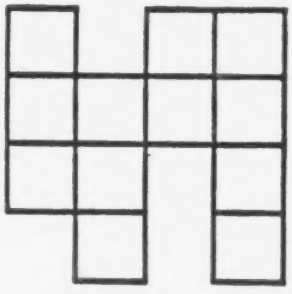
A = _____cm^2

2.



A = _____cm^2

3.



A = _____cm^2

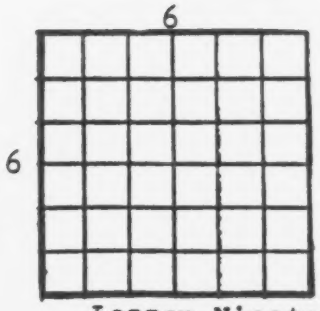
Find the Area of a Square

EXAMPLE 1:

Find the area of this square. Count the squares. Notice we could find the area a quicker way.

6 X 6 = 36 sq. units

<u>36 square units</u>

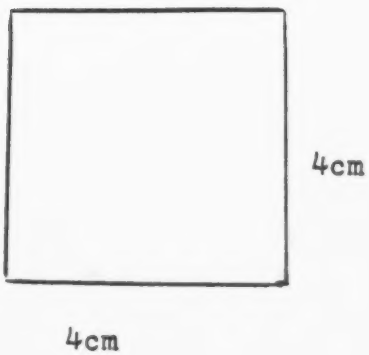


NAME _____

EXAMPLE 2:

Find the area of this square.

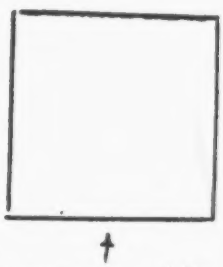
$4cm \times 4cm = 16\ cm^2$



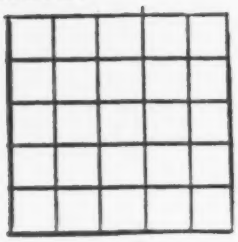
II. **EXAMPLE 3:**

Find the area of a square with each side 7 inches.

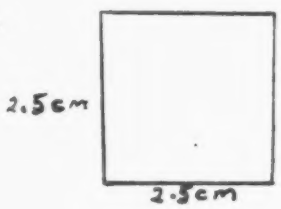
7 in. X 7 in. = 49 sq. in.



EXERCISES

1. 

A = _____

2. 

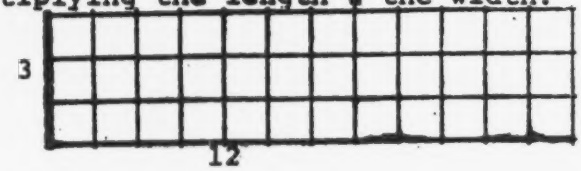
A = _____

3. Measure a side of the square above with a cm ruler and then find the area.

A = _____

III. FINDING AREA

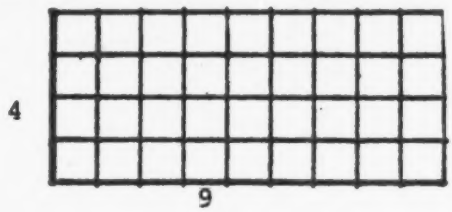
You can find the area of a rectangle by multiplying the length & the width.



12 X 3 = 36

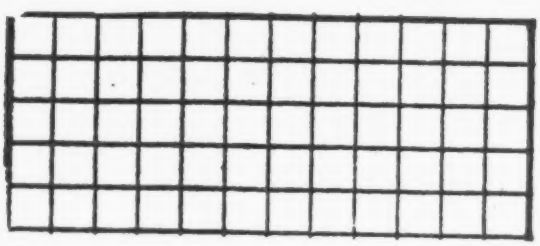
The area of the rectangle above is 36 square units.

1.



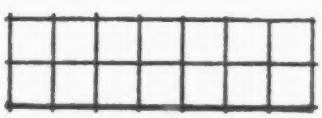
_____ square units

2.



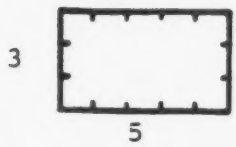
_____ square units

3.



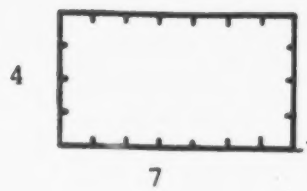
_____ square units.

4.



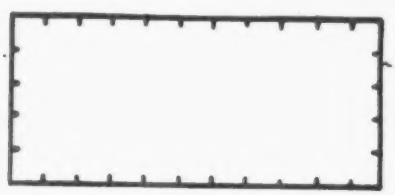
_____ square units

5.



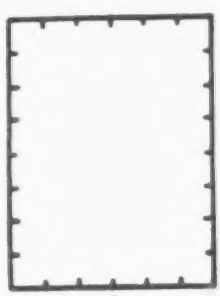
_____ square units

6.



_____ square units

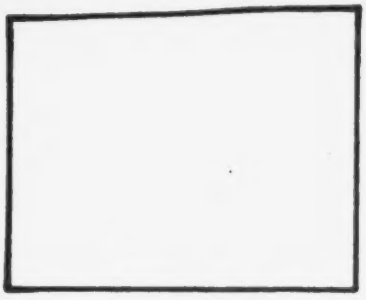
7.



_____ square units

NAME _____

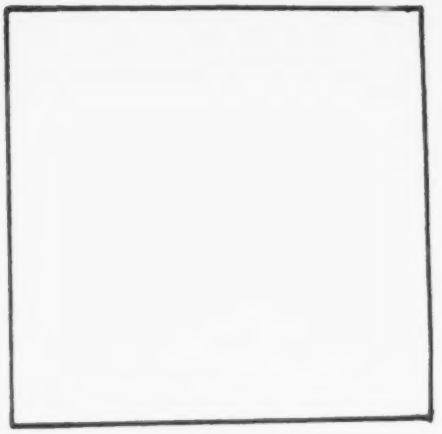
IV. Use your ruler to find the area of these polygons in square centimeters.



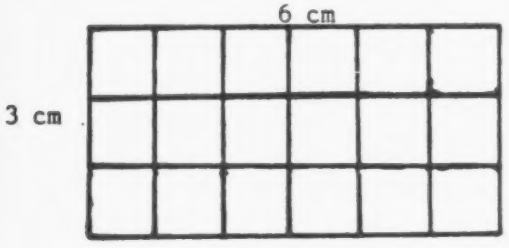
1. _____ square centimeters

2. _____ square centimeters

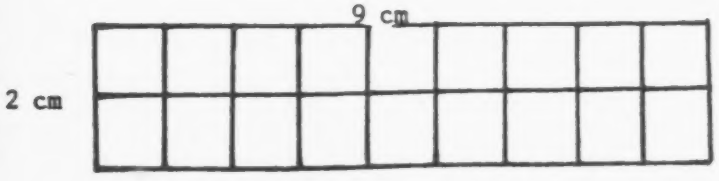
3. _____ square centimeters



4. _____ square centimeters



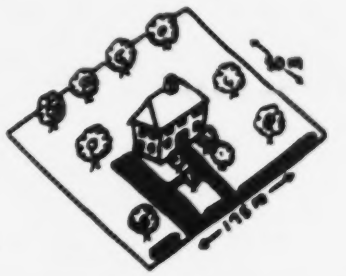
Cut the region on the TOP into three (3) pieces to make it fit the region on the BOTTOM.



GRADE 5

NAME_____

LESSON TWENTY



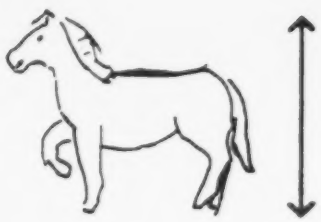
TO THE PARENT: In this lesson your child will determine the appropriate unit in which to measure length. Your child might need to review the units in Lesson 16.

I. These are only diagrams of "real" objects. Circle the best unit of measure to use for the "real" object.

1.

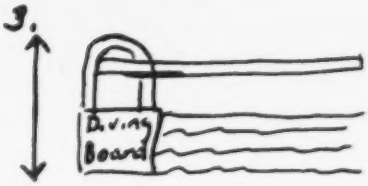
1 mm 1 cm (1 m)

2.



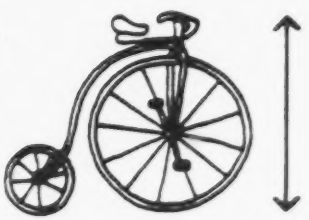
200 mm 200 cm 200 m

3.



10 cm 10 m 10 km

4.



99 mm 99 cm 99 m

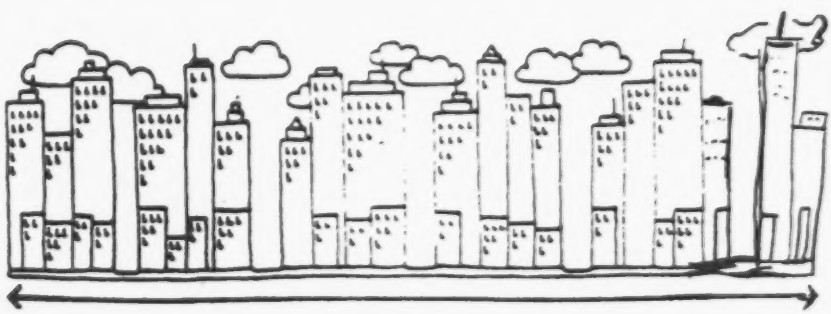
5.

1 mm 1 cm 1 m

6.

100 mm 100 cm 100 m

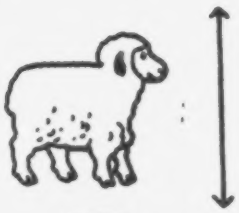
7.



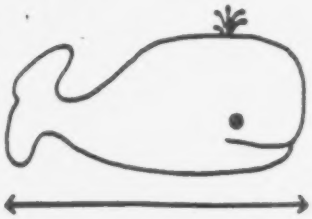
1 cm 1 m 1 km

name_____

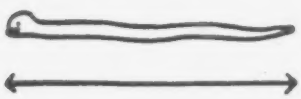
II. Metric Units of Length: Circle the most reasonable length for the items pictured below.

1. 

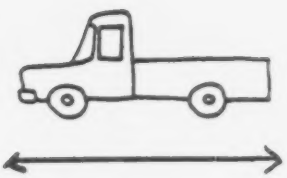
75 mm (75 cm) 75 m

2. 

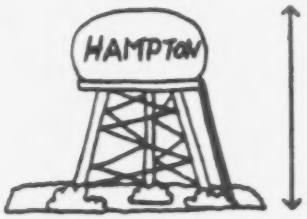
22 cm 22 m 22 km

3. 

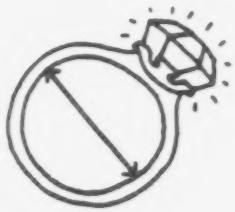
463 mm 463 cm 463 m

4. 

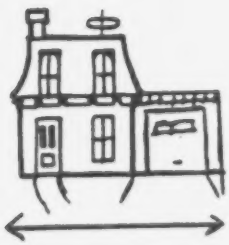
5 cm 5 m 5 km

5. 

30 mm 30 cm 30 m

6. 

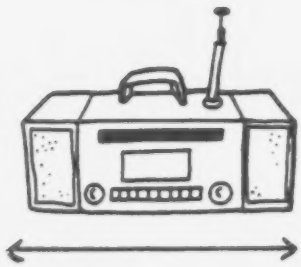
7 mm 7 cm 7 m

7. 

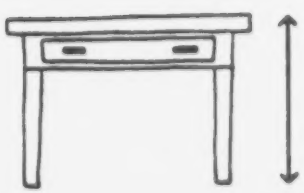
16 mm 16 cm 16 m

8.

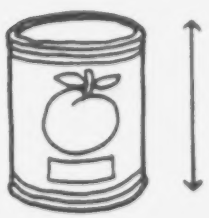
167 mm 167 cm 167 m

9. 

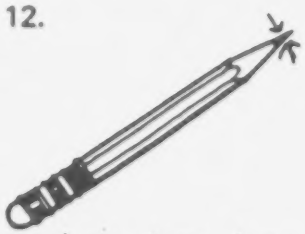
95 mm 95 cm 95 m

10. 

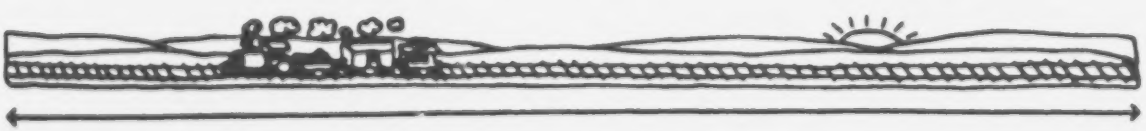
76 mm 76 cm 76 m

11. 

165 mm 165 cm 165 m

12. 

1 mm 1 cm 1 m

13. 

500 cm 500 m 500 km

III. CHOOSING THE BEST UNIT OF LENGTH

Write meter(s), centimeter(s), millimeter(s) or kilometer(s) in each blank so that the sentence makes sense. Also write the answers on the answer sheet.

1. Fred's old car has been driven more than 100,000 _____.
2. Sue said, "Last year on vacation we traveled more than 2,500 _____ in our car.
3. Tom, my friend in the sixth grade, is 158 _____ tall.
4. The tumbling mat used in physical education is 200 _____ long.
5. The cookie is 4 _____ thick.
6. The mosquito is four _____ long.
7. My mother's shoe is about 20 _____ long.
8. The diving pool at the "Y" is 3 _____ deep.
9. Our house is 20 _____ long.
10. My new ballpoint pen is 18 _____ long.
11. The Boston Marathon is run on a course 31.5 _____ long.
12. My fingernail is about 10 _____ wide.
13. The hot dogs my mother cooks are about 15 _____ long.
14. Joe ran almost 230 _____ across the playground to the bus.
15. This page is about 22 _____ wide.

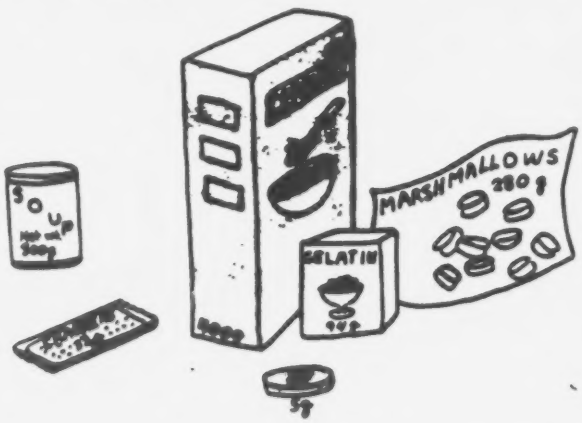
GRADE 5 NAME_____

LESSON TWENTY-ONE

TO THE PARENT: In this lesson your child will learn about metric units of weight (mass) and capacity and will read a thermometer.

one cup is about the same as 250 milliliters.

The gram(g) is used to measure the mass of things that are not very "heavy."



CAPACITY

How big is a liter? Let's make a box which will show you.

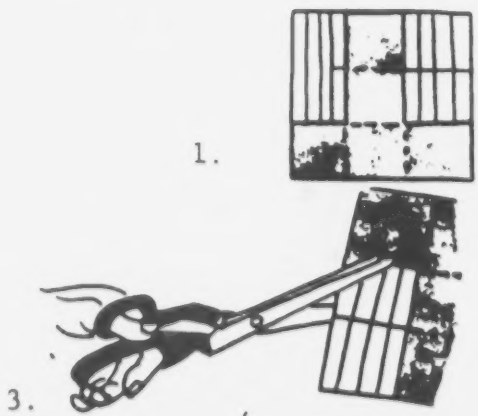
1. You will need a piece of paper which is 3 decimeters (30 centimeters) in length and width. Measure off using your metric ruler 3 squares with sides 10cm each across the bottom and 3 squares with sides 10cm each as shown in the diagram. Cut as shown.

2. Before folding paste it on cardboard to make it stronger and cover with self adhesive paper or plastic to make it stronger.

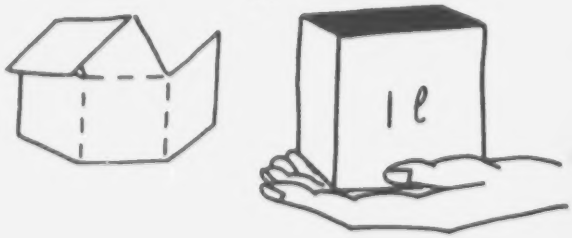
3. Fold as shown and tape edges securely.

4 You now have a 10cm X 10cm X 10cm box which holds 1 liter.

If you cannot waterproof the box use a <u>1 pound coffee can</u> as a model. It holds 1 liter.

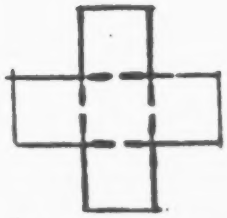


Try this experiment.
Fill a quart container with sand, rice or beans. Then empty it into the liter box. Which holds more, a liter or a quart?



1. Cut out:

2. Fold on dotted lines to make a cube without a top. Cover with clear adhesive tape before taping to make the box waterproof.

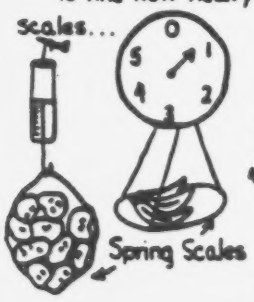


This little box is 1cm X 1cm X 1cm. It holds 1 milliliter of liquid. 1 milliliter of water weighs 1 gram.

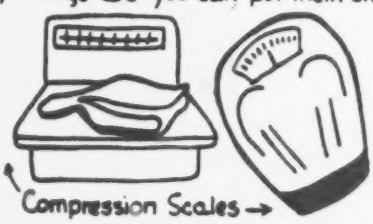
WEIGHT (MASS)

Scales and Balances

To find how heavy things are you can put them on scales...

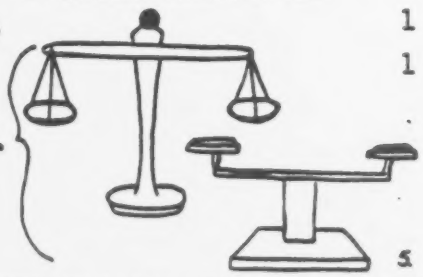


Spring Scales



Compression Scales →

or on balances using metric "weights" or mass pieces.



The following items weigh about 1 gram (g) :

1 shelled peanut	1 dollar bill
1 potato chip	1 package of sugar substitute
1 M & M	

I. Look on the kitchen shelf to find some canned and boxed foods. List at least five here with their weight.

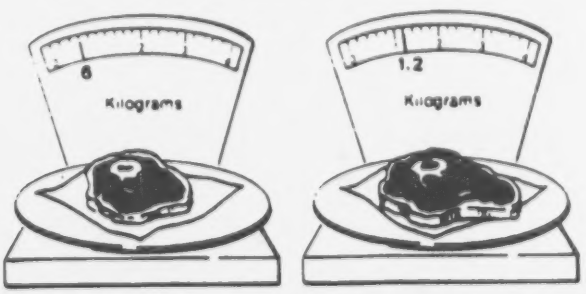
1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

The Kilogram (1000 grams) is used to measure heavier things.

Meat: How many kilograms of meat in all?

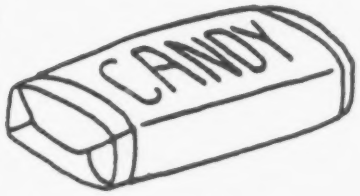


People: A football player weighs about 100 kg.

II. **Weight: Gram and Kilogram**
Circle the better measure of weight for each object.

name_____

1.



31 g 31 kg

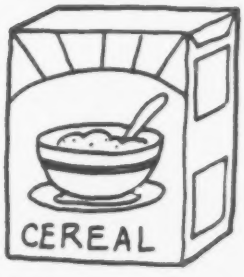
2.

35 g 35 kg

3.

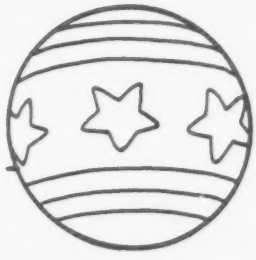
40 g 40 kg

4.



255 g 255 kg

5.

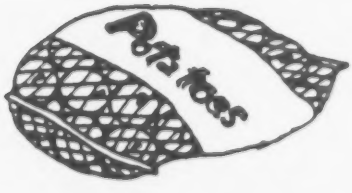


566 g 566 kg

6.

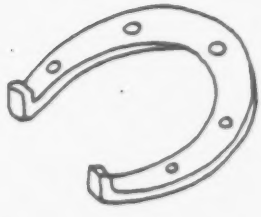
750 g 750 kg

7.



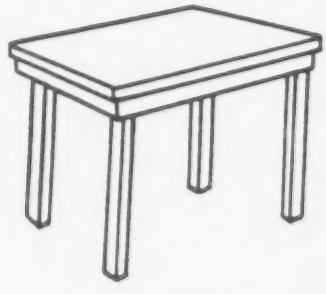
1225 g 1225 kg

8.



1 g 1 kg

9.

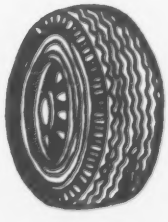


5 g 5 kg

10.

140 g 140 kg

11.



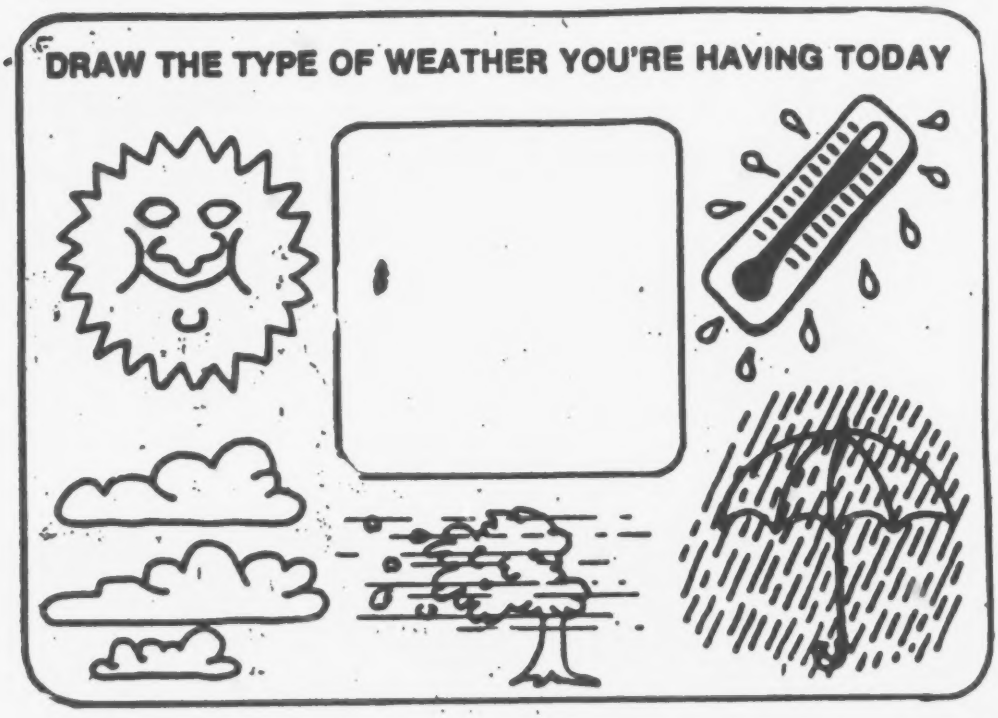
18 g 18 kg

12.

9 g 9 kg

NAME _____

TEMPERATURE

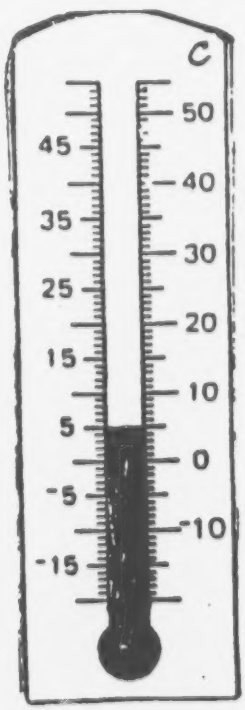


Reading Thermometers

Scales can be set up differently on thermometers. This one has a mark for each degree.

What temperature is shown?

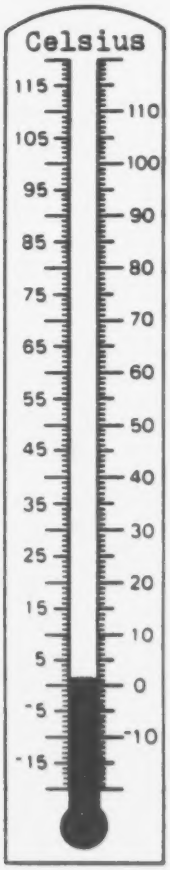
5°C



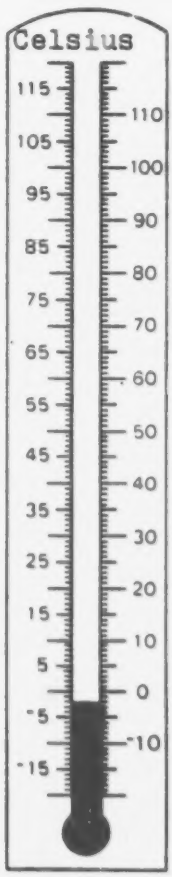
NAME_____

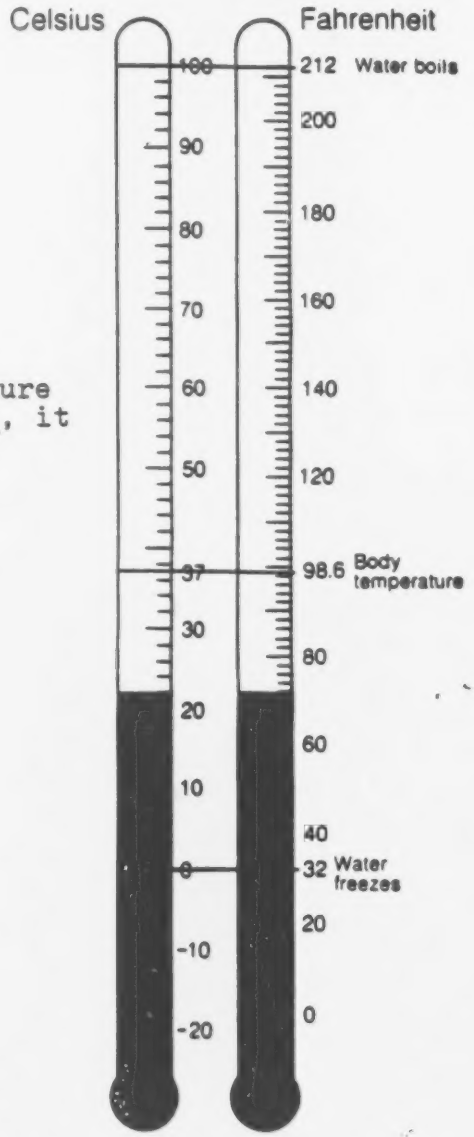
III. **Read each thermometer and then complete each sentence.**

1. When the temperature is _____, you need to wear a coat scarf and mittens.



2. When the temperature is _____, it is ice skating weather.

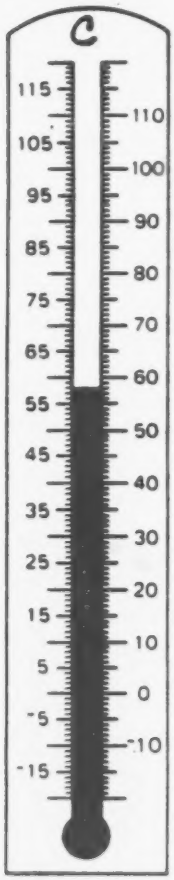




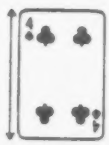
Note: The thermometer above is graduated every 2 .

NAME _____

3. The highest outdoor temperature measured on earth is _____.



Choose the best measure.

4. 

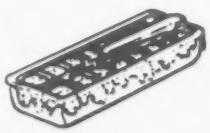
90 mm
90 cm
90 m

5.

10 ml
100 ml
1000 ml

6.

450 g
450 kg

7. 

25° F
25° C

If you have a thermometer, use it to measure the following:

8. _____temperature indoors

9. _____temperature outside in the shade

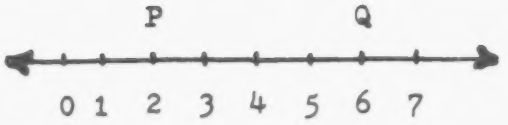
10. _____temperature outside in the sun

11. _____temperature in the refrigerator

GRADE 5 NAME_____

LESSON TWENTY-TWO

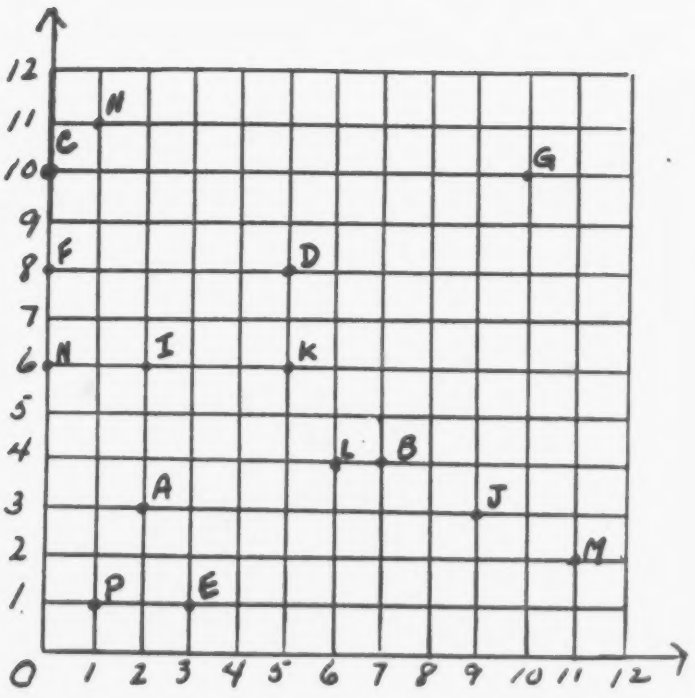
I.



TO THE PARENT: In this lesson your child will graph points on a coordinate axis.

On the number line the coordinate of P is 2.
What is the coordinate of Q? _____

PLOTTING USING COORDINATE AXES



Points on a coordinate are named by 2 coordinates. The first one is from 0 to the right, the second one is from 0 up.

A (2,3) Move 2 to the right, and 3 up.

B (7,4) Move 7 to the right, and 4 up.

C (0,10) Do not move from 0, go up to 10.

Write the coordinates for each of the letters.

D. _____	G. _____	J. _____	M. _____
E. _____	H. _____	K. _____	N. _____
F. _____	I. _____	L. _____	P. _____

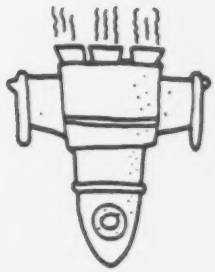
NAME _____

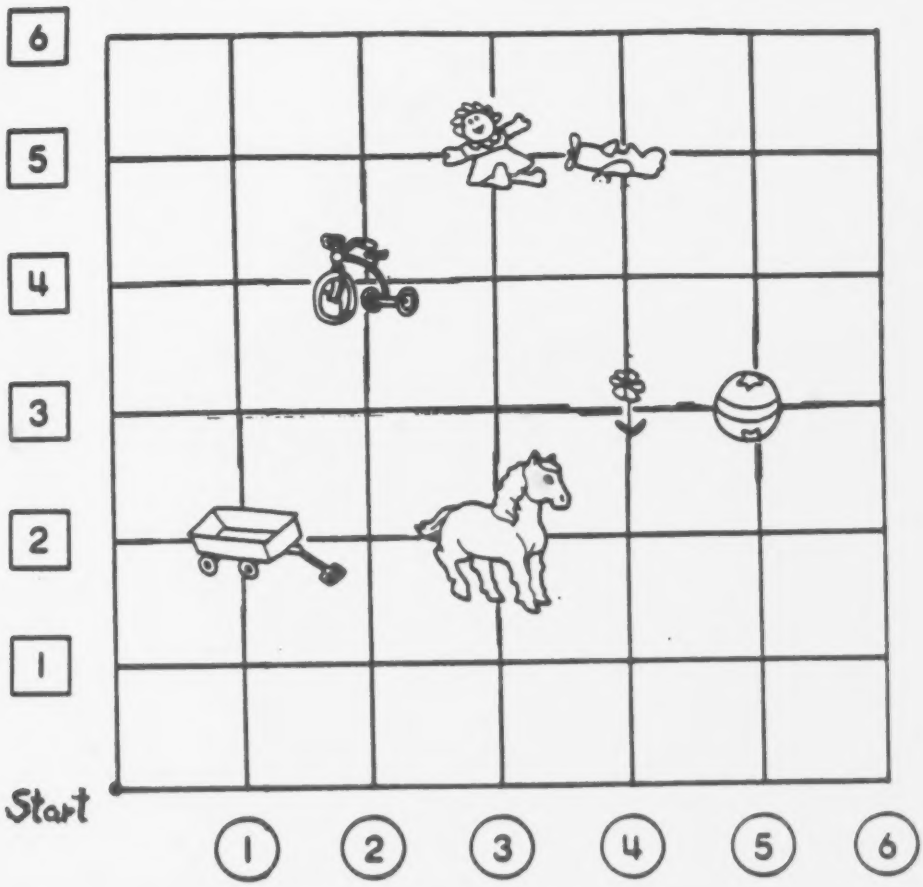
USING COORDINATES

Where is the ?

Start at "•" Go over (3). Go up [2].

The is at (3), [2].





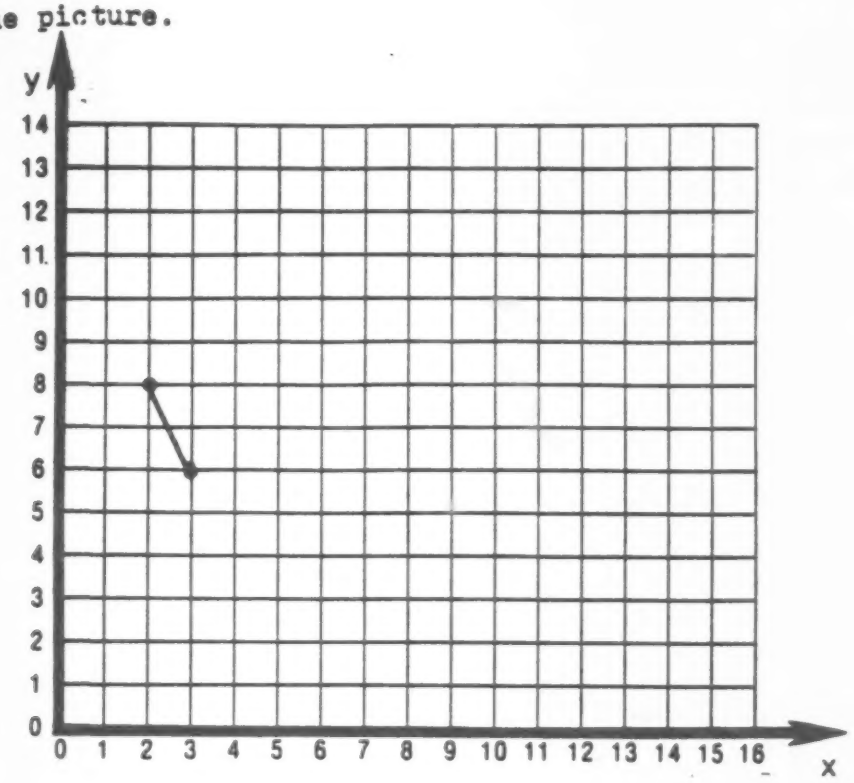
MATCH

(4, 5) (5, 3) (2, 4) | (3, 5) (4, 3) (1, 2)

WHIRLEY BIRD

II. Name the picture.

1.



Graph the picture. Find each point listed below. The first one has been done for you. Connect the points with straight lines in the order listed. Lift pencil when told to. Start a new line with the next group of points.

(2,8)
(3,6)
(1,6)
(3,10)
(1,10)
(2,8)
(8,10)
(9,10)
(9,12)
(15,13)
(15,11)
(3,13)
(3,11)
(9,12)
Lift pencil

Begin again
(9,10)
(11,10)
(11,7)
(14,7)
(14,5)
(12,3)
(7,3)
Lift pencil
Begin again
(2,8)
(6,3)
(7,3)
(7,2)
(5,2)
Lift pencil

Begin again.
(14,3)
(13,2)
(7,2)
Lift pencil
Begin again
(11,3)
(11,2)
Lift pencil
Begin again
(11,10)
(12,10)
(14,8)
(14,7)

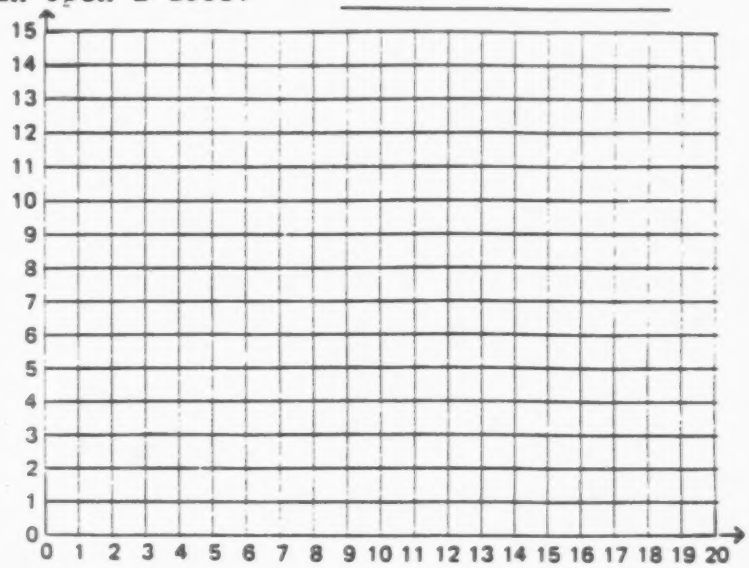
End

PICTURE GRAPHS

Mark each ordered pair.
Connect the points in order.
Begin with column one.

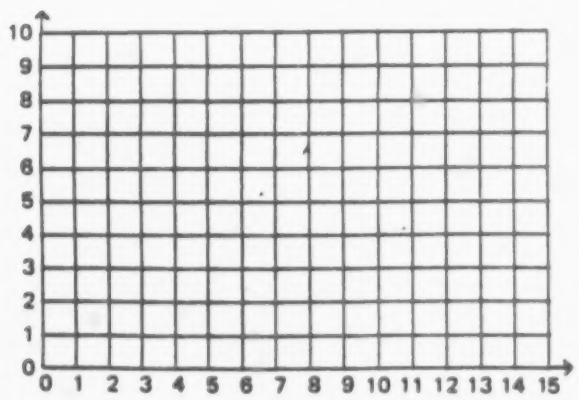
2. **What has no hands but can open a door?** _____

(2,6)	(12,10)
(6,6)	(11,10)
(8,8)	(10,11)
(8,9)	(8,11)
(20,9)	(8,12)
(18,11)	(6,14)
(17,10)	(2,14)
(16,11)	(0,12)
(15,10)	(0,8)
(14,10)	(2,6)
(13,11)	

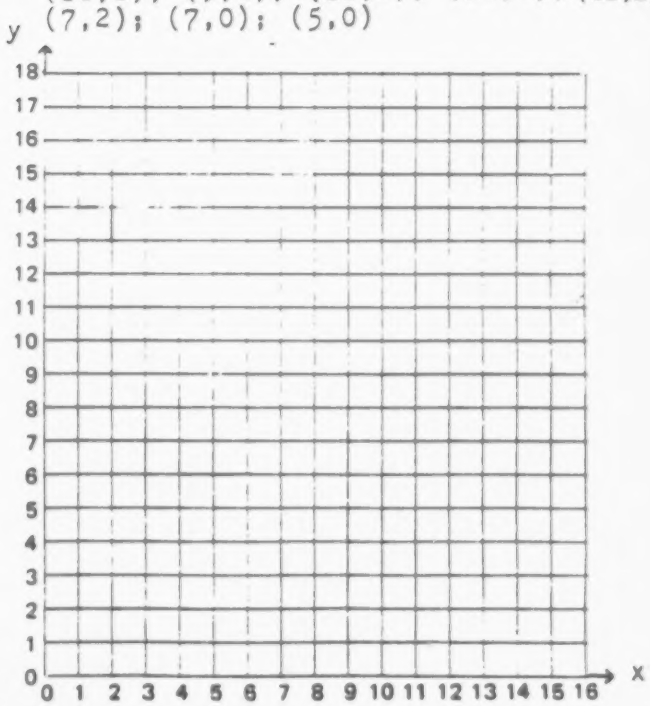


3. Moves on water.

(0,2)	(12,7)	(8,10)	(3,7)
(2,0)	(10,6)	(5,8)	(1,6)
(13,0)	(12,5)	(8,6)	(3,5)
(15,2)	(12,2)	(8,2)	(3,2)
(12,2)	(8,2)	(3,2)	(0,2)



4. Connect in order given as the points are plotted.
(5,0); (5,2); (0,2); (2,4); (1,4); (3,6); (2,6); (4,8); (3,8); (6,12); (9,8); (8,8); (10,6); (9,6); (11,4); (10,4); (12,2) (7,2); (7,0); (5,0)



NAME _____

3. Mrs. Saddler has 180 pounds of feed to divide equally among 16 horses. How much feed can she give each horse?

Given: _____

_____

?: _____

_____

4. There were 31 swimming classes, with 16 children in each class. How many children took swimming?

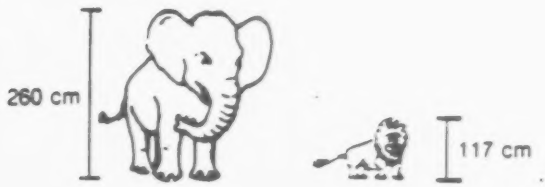
Given: _____

_____

?: _____

_____

5. The elephant is how much taller than the lion?



Given: _____

_____

?: _____

_____

6. Joe had 29 old coins. He bought more coins and now has 54 in all. How many coins did he buy?

Given: _____

_____

?: _____

_____

GRADE 5 NAME_____

LESSON TWENTY-THREE

TO THE PARENTS: In this lesson your child will solve word problems involving whole numbers. Alert your child to the many real life problems encountered each day.

PROBLEM SOLVING

READ

Step 1: Read the problem. Ask yourself what you are given and what you are asked to find.

EXAMPLE: In the Hampton School, there were three fifth grades with 29 students in one class, 33 students in another, and 31 in another. How many fifth graders attended the fifth grade in Hampton School?

What are you given? 29 students
33 students
31 students

What are you asked to find? How many fifth grade students altogether.

I. EXERCISE SET 1
Tell what you are given and what you are asked to find.

1. Joe sold 72 papers on Monday, 87 on Tuesday, 77 on Wednesday, and 92 on Thursday. How many papers did he sell in four days?

Given: 72 papers, 87 papers, 77 papers, 92 papers

?: How many in four days?

2. The three parking lots had spaces for cars as follows: Lot A, 32 spaces; Lot B, 60 spaces; Lot C, 48 spaces. How many spaces for cars are available on all three lots?

Given: _____

_____

?: _____

_____

NAME _____

PLAN

Step 2: What operation will you use to solve the problem?

EXAMPLE: Fred had 65 stamps in his collection. He got more stamps for his birthday. Then he had 126 stamps. How many stamps did Fred get for his birthday?

You now have <u>126</u> stamps <u>total</u>. You had 65. You are asked to find the difference.

<u>Subtract</u> is the answer.

II. EXERCISE SET 2
Tell what operation you could use to solve the problem.

1.

Operation: ÷ divide

2. There are 198 campers in archery classes, with 18 campers in each class. How many archery classes were there?

Operation: _____

3. How far is it from Park City to Dover?

Operation: _____

4. The car is how much longer than the bicycle?

Operation: _____

5. 56 students went on a field trip. 4 students were assigned to each car. How many cars were needed?

Operation: _____

6. Jody guessed that Ellen weighs 75½ pounds. Ellen's actual weight is 80¼ pounds. Find the difference between Jody's guess and Ellen's actual weight?

Operation: _____

NAME_____

SOLVE

Step 3: Solve the problem.

EXAMPLES:

1. One Saturday John sold 78 papers, Donald sold 67 papers, and Michael sold 91 papers. How many papers did the boys sell altogether?

READ
Given: 78 papers
67 papers
91 papers

Question: How many papers did the boys sell altogether?

PLAN You must add.

SOLVE
$$\begin{array}{r} 78 \\ 67 \\ +\ 91 \\ \hline 236 \end{array}$$

The boys sold 236 papers altogether.

2. One hot-dog vendor sold 18 trays of hot dogs. There were 32 hot dogs on each tray. How many hot dogs did he sell?

READ
Given: 18 trays sold
32 hot dogs in each tray.

Question: How many hot dogs did he sell?

PLAN You multiply the number of hot dogs in each tray by the number of trays.

SOLVE 18 X 32 = 576 hot dogs

So, 576 hot dogs were sold.

III. EXERCISE SET 3
Solve these problems. Show your work.

1.

FOR STUDENT COUNCIL PRESIDENT

MARY	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II	32
GEORGE	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	43
JOANNE	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	49

Find the total votes cast for Student Council President.

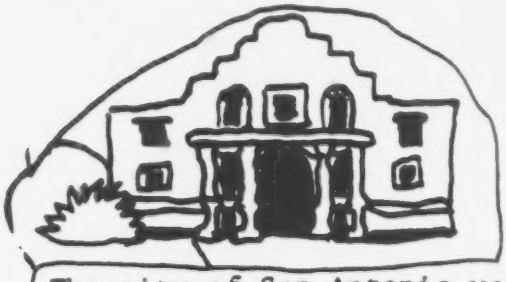
NAME_____

2.

How many feet higher did Sandy get than Naomi?

3. Alice sold 47 boxes of hockey buttons. There were 50 buttons in each box. How many buttons did she sell?

4.



The city of San Antonio was founded in 1718. Houston became a city 119 years later. In what year did Houston become a city?

NAME_____

5. The camp cook expected 285 people for lunch. He cooked 3 ears of corn for each person. How many ears of corn did he cook?

6. Dan bought 19 packages of baseball cards. There were 5 cards in each package. How many cards did he buy?

7. If the trail is marked into 25-foot sections, how many sections will there be?

8. Mary had 496 stamps. She bought 117 stamps. How many stamps did she have then?

CHECK

Step 4: Check to see if your answer is reasonable.

EXAMPLE:

How much does the dog weigh?

Given: dog + girl ⟶ 112 lbs.
girl ⟶ 79 lbs.

Find the dog's weight.

Subtract:
$$\begin{array}{r} 112 \\ -\ 79 \\ \hline 33 \text{ lbs} \end{array}$$

Is your answer reasonable?

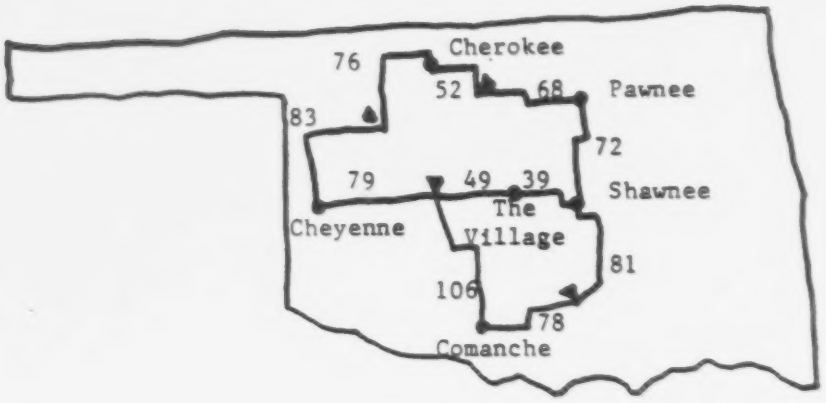
YES. The dog weighs less than the girl plus the dog.

NAME_____

IV. **EXERCISE SET 4**
Solve these. Ask yourself if the answer is reasonable.

1. Tim bought 16 packages of football cards. There were 6 cards in each package. How many cards did he buy?

2. One day, 112 people separated into 8 equal groups to go hiking. How many people were in each group?



Use the map to find the shortest distance between:

3. Cherokee & Pawnee

4. Cherokee & Comanche

5.

How much taller is the basketball player?

6.

INDIANAPOLIS 500	
DATE	WINNING SPEED
1911	75 mph
1972	163 mph

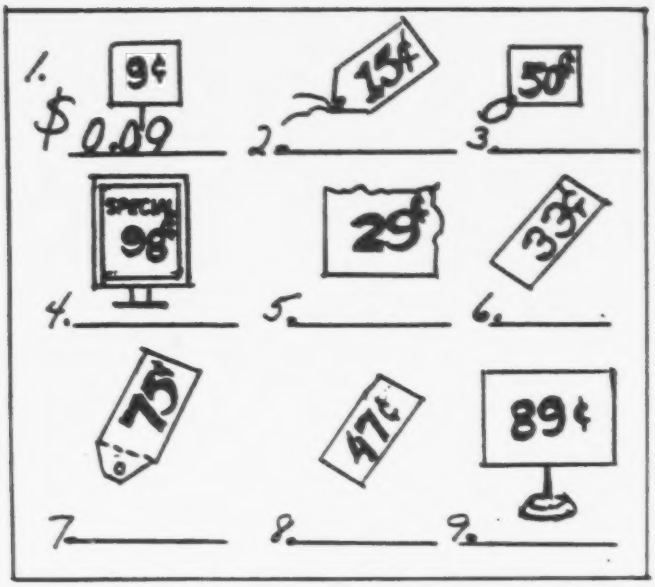
By how much did the winning speed increase?

GRADE 5 NAME _____

LESSON TWENTY-FOUR

TO THE PARENT: In this lesson your child will solve application problems. Many will involve addition and subtraction of decimals.

I. Write each price with a dollar sign and a decimal point.



10. eight dollars and sixty-seven cents

_____

11. ninety-three cents

_____

12. four dollars and nine cents

_____

13. one dollar and four cents

_____

14. two dollars and sixty-four cents

_____

15. one dollar and ten cents

_____

To solve problems with decimals

- **Use the four step method.**
- **Line up the decimal points in addition and subtraction.**

NAME_____

EXAMPLE 1:

Betty bought a ticket for $1.25. She gave the cashier a $5 bill. What was her change?

READ $1.25 cost of ticket
$5 given the cashier
How much change?

PLAN You are asked about change from $5 so you subtract.

SOLVE
$$\begin{array}{r} \$5.00 \\ -\ 1.25 \\ \hline \$3.75 \end{array}$$

CHECK $5 - $1 is $4
So, $3.75 is reasonable

TWO STEP PROBLEMS

EXAMPLE 2:

For picnics, Mrs. Booth bought a portable cooler for $22.50 and a large jug for $5.62. She gave the cashier $30.00. How much change did she get back?

READ: $22.50 cost of cooler
5.62 cost of jug

$30.00 given the cashier

PLAN You are asked to find change from 2 purchases.
add then subtract

SOLVE
$$\begin{array}{r} \$22.50 \\ +\ 5.62 \\ \hline \$28.12 \end{array} \qquad \begin{array}{r} \$30.00 \\ -\ 28.12 \\ \hline \$\ 1.88 \end{array}$$

CHECK Purchases are about $22 and $6 $22 +$6 =$28

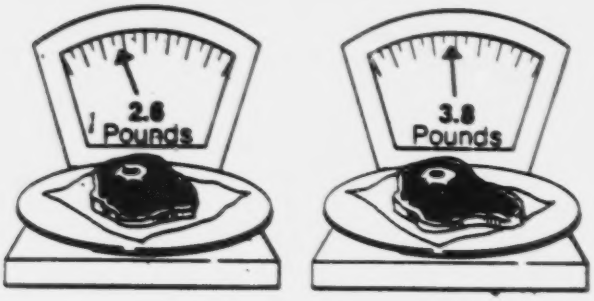
$30 -$28 =$2

So, $1.88 is reasonable.

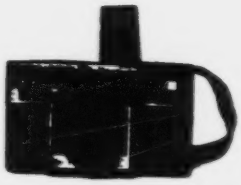
NAME_____

II. EXERCISES
Solve these problems. Show your work.

1. How much pot roast did Kristie buy if she bought both roasts?



2.

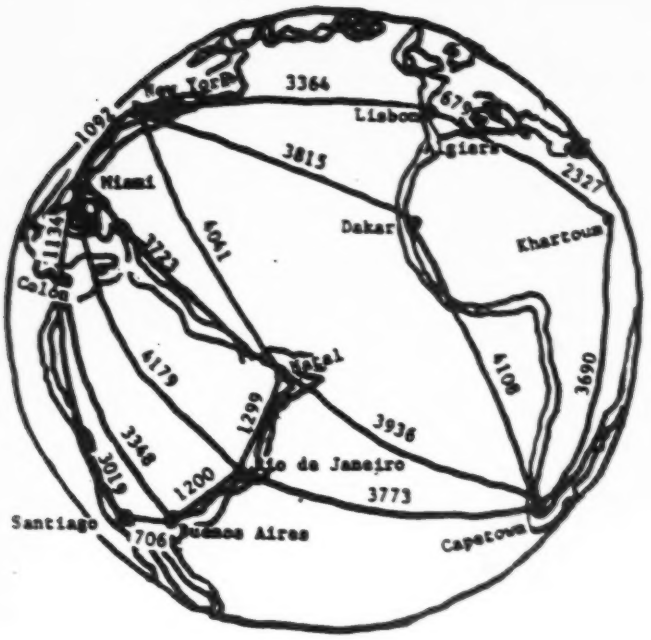


Camera A costs $17.95.
Camera B costs $31.95.
How much cheaper is Camera A?

3. Dana saves $0.25 each week. How much will Dana save in 8 weeks?

4. The Markhams bought 5 hot-turkey sandwiches at $1.85 each. What was the total cost?

NAME_____

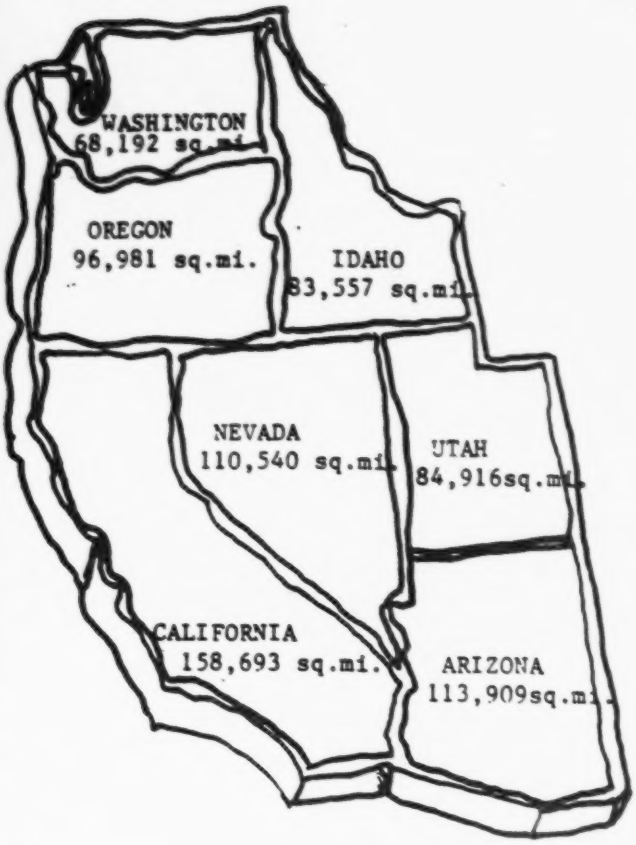


The picture above gives airline distances in miles between certain cities. Use the picture to answer the questions below.

5. What is the distance between New York and Capetown by way a. of Natal? b. By way of Dakar?

6. How much shorter is the trip from New York to Lisbon than the trip from New York to Natal?

NAME_____



This map shows the area of each state. Use the picture to answer these questions.

7. What is the land area of each of these states?

   a. Arizona_____

   b. Utah _____

   c. California_____

   d Washington_____

8. Which state has the largest land area?

   _____

9. What is the total land area of California, Nevada, Utah, and Arizona?

NAME_____

III. Find the sale price.

1.

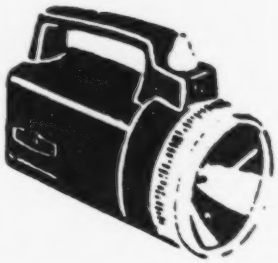
$\frac{1}{2}$ OFF

Reg. $8.48

Sale price _____

2.

SAVE 99¢



WAS $8.59

NOW _____

3. Clip the coupon worth 39¢.

MILK SHAKE

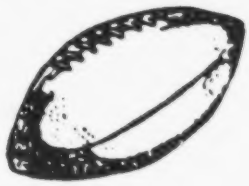
was 99¢

now_____

4.

SAVE $2.99

Reg. $8.29



Sale price _____

NAME _____

Check these ads.

Write "YES" if the ad is correct; write "NO" if incorrect.

5. ½ OFF

WAS $89.90
NOW $45.15

6.

SAVE $40.15
Reg $179.99
NOW $139.84

7. SAVE 78¢

NOW 2 for $7.00
WAS $3.89 each

8.

½ PRICE
NOW $4.99
WAS $9.98

9. Clip the coupon 59¢

HAMPTON RESTAURANT
Special

CRAB CAKE DINNER Reg $4.40
NOW $3.89

10.

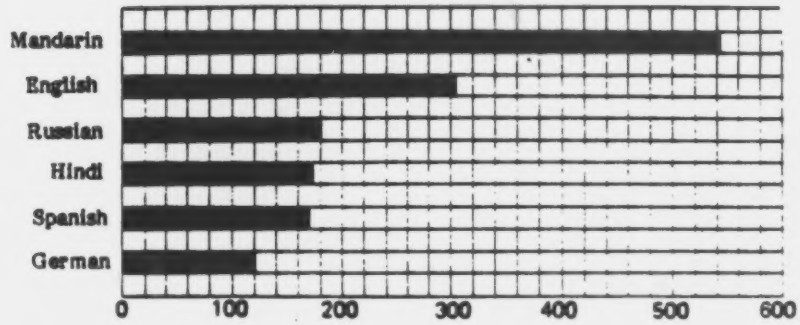
SAVE $2.90
WAS $7.89
NOW $5.99

GRADE 5 NAME_____

LESSON TWENTY-FIVE

TO THE PARENT: In this lesson your child will answer and create problems based on information selected from charts, tables, maps, and graphs.

I. BAR GRAPHS



Languages Spoken In the World

Answer the questions about the graph above.

1. Which language is spoken by more people than any other?

   Mandarin (Chinese)

2. How many languages are spoken by more than 200 million people?

   _____

3. Make up your own question.

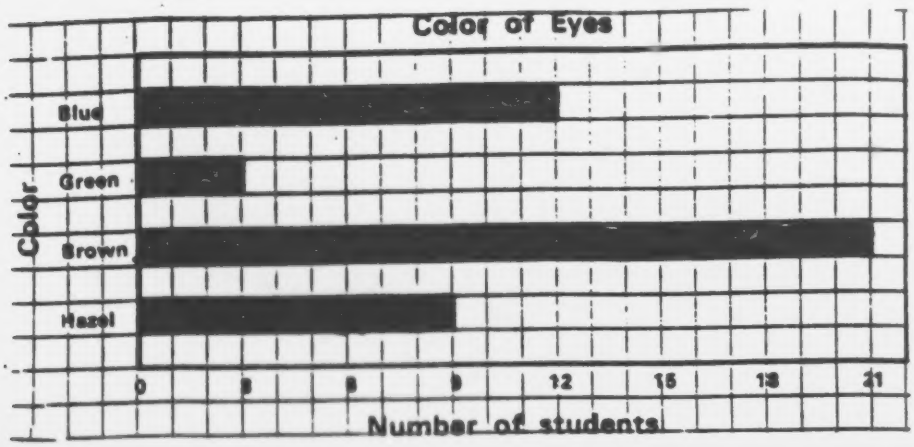
_____

_____

_____

NAME_____

II.



Answer the questions about the graph.

1. How many people have hazel eyes?

_____

2. How many more people have brown eyes than blue?

_____

Make up two questions about the graph.

3. _____

_____

_____

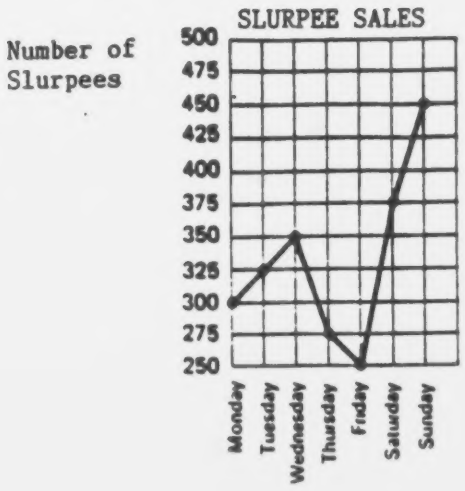
4. _____

_____

_____

NAME_____

III. LINE GRAPHS



Answer the questions about the graph.

1. On what day were the least Slurpees sold?

_____

2. How many more Slurpees were sold on Sunday than on Wednesday?

_____

Write two questions about the graph.

3. _____

_____

_____

4. _____

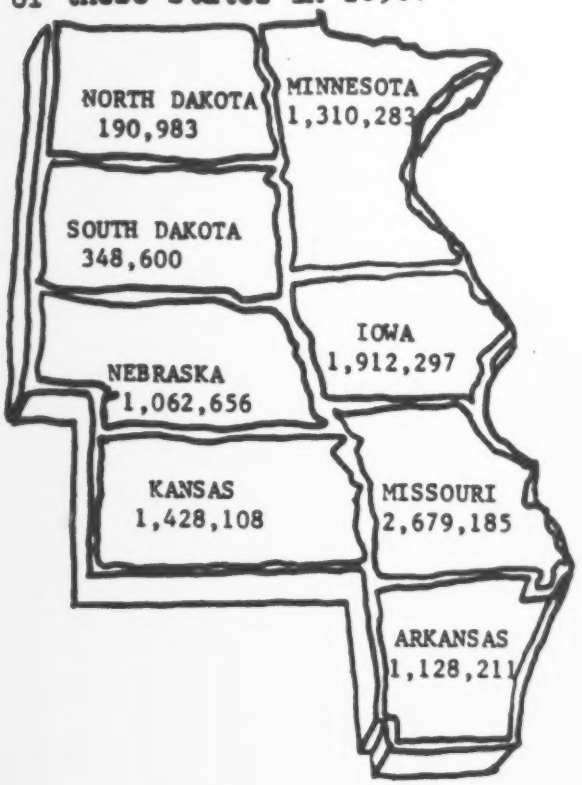
_____

_____

NAME_____

IV. MAPS

This map shows the number of people who lived in each of these states in 1890.



1. Which state had the most people? _____

2. Which state had more people, Kansas or Iowa? _____

Write two questions about the map.

3. _____

_____

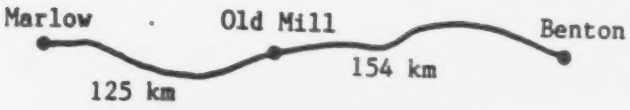
_____

4. _____

_____

_____

NAME_____

V. 

Write two questions about this map.

1. _____

_____

_____

2. _____

_____

_____

VI. TABLES AND CHARTS

Asia	2,200,000,000
Europe	750,000,000
Africa	330,000,000
Latin America	300,000,000
North America	240,000,000
Oceania	21,000,000

Estimated Population

Answer the questions about the chart.

1. Where do the most people live? _____

2. Do more people live there than the other regions together?

_____

3. Make up your own question about the chart.

_____

_____

_____

VII. The earth:
Planetary symbol ⊕

1 inch represents
8000 miles

PLANET	SYMBOL	NUMBER OF TIMES THE EARTH'S DIAMETER
Mercury	☿	.38
Venus	♀	.95
Mars	♂	.53
Jupiter	♃	11.19
Saturn	♄	9.5
Uranus	♅	3.7
Neptune	♆	3.9
Pluto	♇	.5
Earth		1.00

NAME _____

1. Name the planets from largest to smallest.

a. _____ g. _____

b. _____ h. _____

c. _____ j. _____

d. _____

e. _____

f. _____

2. Which planet is about the same size as the earth?

_____

3. Name two planets that have diameters about ½ the size of earth's.

a. _____ b. _____

4. Name the two planets which have diameters nearly 4 times as large as the earth's diameter.

a. _____ b. _____

C O N G R A T U L A T I O N S ! ! ! ! !

You have now completed . . . . .

M A T H B Y M A I L